MDX-C670/C670RDS

SERVICE MANUAL

US Model
Canadian Model
E Model
MDX-C670
AEP Model
UK Model
MDX-C670RDS

Photo : MDX-C670RDS

Refer to RM-X2S/X3S Service Manual (9-960-039-□□) issued previously for information of remote commander (RM-X2S) supplied with this set.

Model Name Using Similar Mechanism	NEW
Base Mechanism Type	MG-164K-138
Optical Pick-up Name	KMS-241A/J2N

SPECIFICATIONS

MD player section

Signal-to-noise ratio	90 dB
Frequency response	10 – 20,000 Hz
Wow and flutter	Below measurable limit

Tuner section

FM

Tuning range	**MDX-C670 :** FM tuning interval : 50 kHz/200 kHz switchable 87.5 – 108.0 MHz (at 50 kHz step) 87.5 – 107.9 MHz (at 200 kHz step) **MDX-C670RDS :** 87.5 – 108.0 MHz
Aerial terminal	External antenna connector
Intermediate frequency	10.7 MHz
Usable sensitivity	10 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	62 dB (stereo), 65 dB (mono)
Harmonic distortion at 1 kHz	0.9% (stereo), 0.5% (mono)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz
Capture ratio	2dB

AM (MDX-C670)

Tuning range	AM tuning interval : 9 kHz/10 kHz switchable 531 – 1,602 kHz (at 9 kHz step) 530 – 1,710 kHz (at 10 kHz step)

MW/LW (MDX-C670RDS)

Tuning range	MW : 531 – 1,602 kHz LW : 153 – 281 kHz
Antenna terminal	External antenna connector
Intermediate frequency	10.71 MHz/450 kHz
Sensitivity	AM, MW : 30 µV LW : 50 µV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	35 W × 4 (at 4 ohms)

– Continued on next page –

MDX-C670
FM/AM MINIDISC PLAYER
MDX-C670RDS
FM/MW/LW MINIDISC PLAYER

MICROFILM

SONY®

General

Output	Line out (2) Power antenna relay control lead Power amplisier control lead Telephone mute control lead (MDX-C670) Illumination control lead
Tone controls	Bass ± 10 dB at 100 Hz Treble ± 10 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 188 × 58 × 174 mm (w/h/d)
Mounting dimensions	Approx. 178 × 50 × 162 mm (w/h/d)
Mass	Approx. 1.1 kg
Supplied accessories	Rotary remote (1) Parts for installation and connections (1 set) Front panel case (1)

U.S. and foreign patents liscensed from Dolby laboratories Licensing Corporation.

Design and specifications are subject to change without notice.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

TABLE OF CONTENTS

1. SERVICE NOTE 2

2. GENERAL 3

3. DISASSEMBLY 7

4. ELECTRICAL ADJUSTMENTS 12

5. DIAGRAMS

5-1. Printed Wiring Boards –MD Section– 15
5-2. Schematic Diagram –MD Section– 17
5-3. Schematic Diagram –MAIN Section– 22
5-4. Printed Wiring Board –MAIN Section– 27
5-5. Printed Wiring Board –DISPLAY Section– 31
5-6. Schematic Diagram –DISPLAY Section– 33

6. EXPLODED VIEWS 35

7. ELECTRICAL PARTS LIST 39

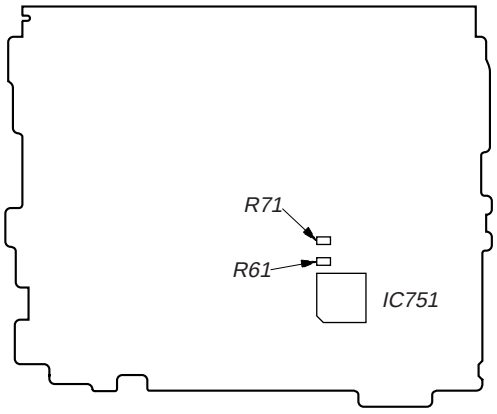
SECTION 1
SERVICE NOTE

- **Note on replacing the MAIN board (German model)**

As the repair parts of MAIN board with mounted parts destined for German model, the MAIN board with mounted parts for AEP model is supplied.
Accordingly, when replacing the board, exchange two following parts.

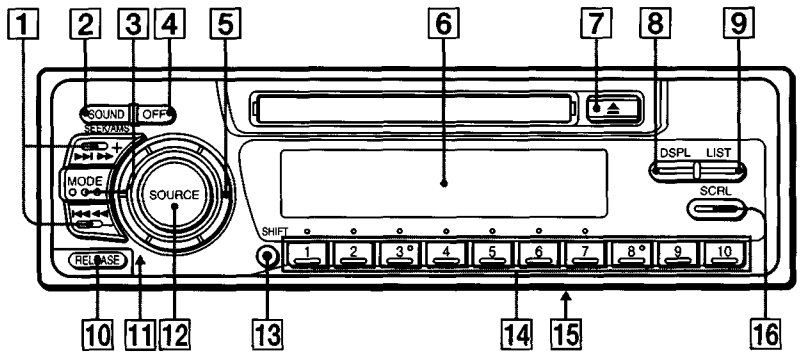
R61 12k → 4.7k (1-216-065-00)
R71 12k → 4.7k (1-216-065-00)

[MAIN BOARD] (Conductor Side)



This section is extracted from MDX-C670 instruction manual.

Location of controls



EN

Refer to the pages for details.

1 **SEEK/AMS (seek/Automatic Music Sensor/manual search) button 6, 8, 12, 15**

2 **SOUND button 11**

3 **MODE (band/changer select) button 7, 8, 12, 14**

4 **OFF button 4, 5**

5 **Dial (volume/bass/treble/balance/fader control) 5, 9, 11, 13, 14**

6 **Display window**

7 **⏏ (eject) button 5**

8 **DSPL (display mode change) button 6, 8, 9, 12, 14**

9 **LIST button**

Disc Memo **13, 14**

List-up **9, 15**

Station Memo **9**

10 **RELEASE (front panel release) button 4, 17**

11 **Reset button (located on the front side of the unit hidden by the front panel) 4**

12 **SOURCE (source select) button 5, 6, 7, 8, 12, 14**

13 **SHIFT button**

PLAY MODE **6, 7, 8, 13, 15**

REP **7, 13**

SET UP **5, 6, 11, 12, 14**

SHUF **7, 13**

14 **During radio reception: Number buttons 8**

During CD/MD playback: Direct disc selection buttons 13

15 **POWER SELECT switch (located on the bottom of the unit)**
See "POWER SELECT Switch" in the Installation/Connections manual.

16 **SCRL (scroll) button 5, 6, 12**

Installation

Precautions

- Do not tamper with the four holes on the upper surface of the unit. They are for tuner adjustments to be made only by service technicians.
- Choose the installation location carefully so that the unit will not interfere with the driver while driving.
- Avoid installing the unit where it would be subject to high temperatures, such as from direct sunlight or hot air from the heater, or where it would be subject to dust, dirt or excessive vibration.
- Use only the supplied mounting hardware for a safe and secure installation.

Mounting angle adjustment

Adjust the mounting angle to less than 20°.

How to Detach and Attach the Front Panel

Before installing the unit, detach the front panel.

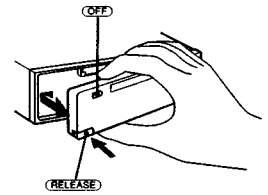
To detach

Before detaching the front panel, be sure to press (OFF) to turn off the unit. Then press (RELEASE), slide the front panel a little to the left, and pull it off toward you.

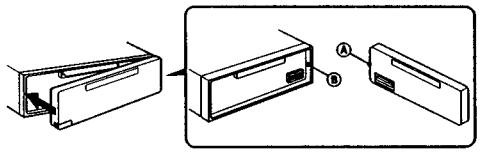
To attach

Align the parts Ⓐ and Ⓑ, and push the front panel until it clicks.

To detach
Retrait



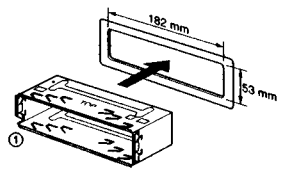
To attach
Pose



Mounting Example

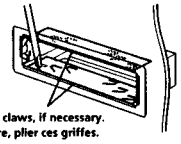
Installation in the dashboard

1



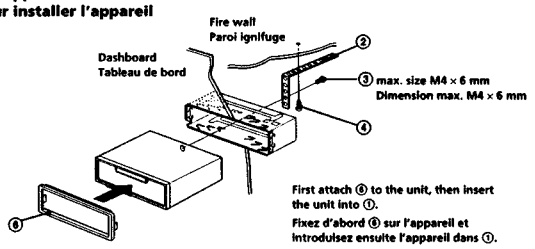
With the TOP marking up
Avec l'inscription TOP vers le haut

2



Bend these claws, if necessary.
Si nécessaire, plier ces griffes.

To support the unit
Pour installer l'appareil


Fire wall
Paroi ignifuge
Dashboard
Tableau de bord
2
3 max. size M4 × 6 mm
Dimension max. M4 × 6 mm
4
B
First attach B to the unit, then insert the unit into 1.
Fixez d'abord B sur l'appareil et introduisez ensuite l'appareil dans 1.

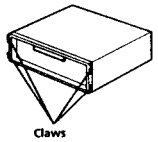
Mounting the Unit in a Japanese Car

You may not be able to install this unit in some makes of Japanese cars. In such a case, consult your Sony dealer.

1

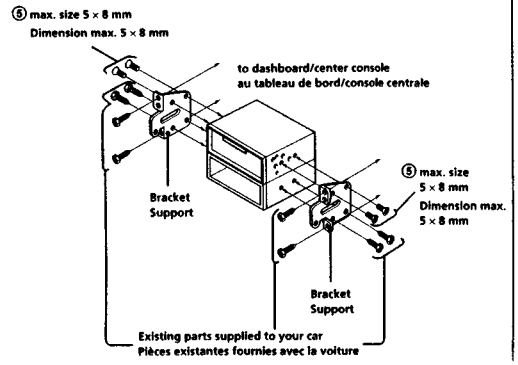
Cut all the claws from the unit with pincers or other suitable tool.

Coupez tous les onglets de l'appareil avec une pince ou un outil approprié.

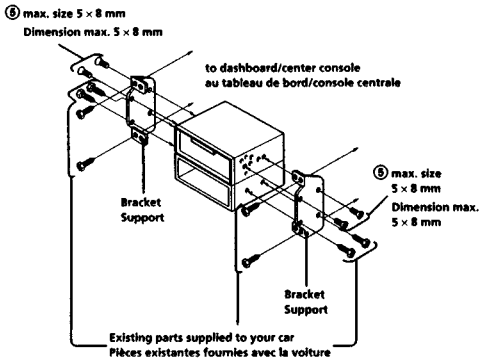


Claws
Onglets

2 TOYOTA



NISSAN



Note

To prevent malfunction, install only with the supplied screws Ⓑ and use existing parts supplied to your car.

Installation

Précautions

- Ne pas toucher les quatre orifices sur le panneau supérieur de l'appareil. Ils servent aux réglages du tuner qui ne doivent être effectués que par un technicien.
- Choisir soigneusement l'emplacement de l'installation, pour que l'appareil ne gêne pas la conduite.
- Eviter d'installer l'appareil dans un endroit exposé à des températures élevées, comme en plein soleil ou à proximité d'une bouche d'air chaud, ou à de la poussière, saleté ou vibrations violentes.
- Pour garantir un montage sûr, n'utiliser que le matériel fourni.

Réglage de l'angle de montage

Ajuster l'inclinaison à un angle inférieur à 20°.

Retrait et pose du panneau avant

Avant d'installer l'appareil, déposer la panneau avant.

Retrait

Avant de détacher la façade, appuyez sur (OFF) pour arrêter l'appareil. Ensuite, appuyez sur la touche ensuite sur (RELEASE), poussez la façade légèrement vers la gauche et tirez vers vous pour l'enlever.

Pose

Aligner les points Ⓐ et Ⓑ, puis pousser l'appareil jusqu'au déclic.

Exemple de montage

Installation dans le tableau de bord

Installation de l'appareil dans une voiture japonaise

Si vous ne pouvez pas installer l'appareil dans une voiture japonaise, consultez votre revendeur Sony.

Remarque

Pour éviter tout dysfonctionnement, utilisez uniquement les vis de montage fournies Ⓑ ainsi que les composants existants de votre voiture.

Connections

Caution

- This unit is designed for negative ground 12 V DC operation only.
- Before making connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Connect the **yellow** and **red** power input leads only after all other leads have been connected.
- Be sure to connect the red power input lead to the positive 12 V power terminal which is energized when the ignition key is in the accessory position.
- **Run all ground wires to a common ground point.**
- Connect the yellow cord to a free car circuit rated higher than the unit's fuse rating. If you connect this unit in series with other stereo components, the car circuit they are connected to must be rated higher than the sum of the individual component's fuse rating. If there are no car circuits rated as high as the unit's fuse rating, connect the unit directly to the battery. If no car circuits are available for connecting this unit, connect the unit to a car circuit rated higher than the unit's fuse rating in such a way that if the unit blows its fuse, no other circuits will be cut off.
- The use of optical instruments with this product will increase eye hazard.

If Your Car has No Accessory Position on the Ignition Key Switch
— POWER SELECT Switch

The illumination on the front panel is factory-set to be turned on even when the unit is not being played. However, this setting may cause some car battery wear **if your car has no accessory position on the ignition key switch.** To avoid this battery wear, **set the POWER SELECT switch located on the bottom of the unit to the ⓑ position, then press the reset button.** The illumination is reset to stay off while the unit is not being played.

Note

The caution alarm for the front panel is not activated when the POWER SELECT switch is set to the ⓑ position.

Connexions

Précautions

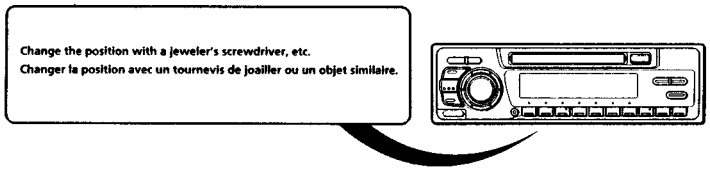
- Cet appareil est conçu pour fonctionner sur tension continue de 12 V avec masse négative.
- Avant d'effectuer les connexions, débrancher la borne de terre de la batterie du véhicule pour éviter tout court-circuit.
- Brancher les fils d'entrée d'alimentation **jaune** et **rouge** seulement après avoir terminé tous les autres branchements.
- Veiller à ne pas raccorder le fil rouge d'entrée d'alimentation à la borne positive de 12 V qui est alimentée quand la clé de contact est sur la position accessoires.
- **Rassembler tous les fils de terre en un point de masse commun.**
- Brancher le câble jaune à un circuit libre de la voiture dont la capacité nominale est supérieure à la capacité du fusible de l'appareil. Si vous branchez cet appareil en série avec d'autres composants stéréo, le circuit de la voiture auxquels ils sont raccordés doit afficher une capacité nominale supérieure à la somme des capacités individuelles de chaque composant. S'il n'y a pas de circuits de voiture affichant une capacité égale à la capacité du fusible de l'appareil, brancher l'appareil directement à la batterie. Si aucun circuit de voiture n'est disponible pour connecter cet appareil, brancher l'appareil à un circuit de voiture supérieur à la capacité du fusible de l'appareil de telle sorte que si l'appareil grille son fusible, aucun autre circuit ne soit coupé.

Si l'appareil est utilisé dans une voiture dont la clé de contact n'a pas de position accessoires
— Interrupteur POWER SELECT

L'éclairage du panneau avant est réglé en usine de manière à s'allumer même quand l'appareil ne fonctionne pas. Cependant, ce réglage risque d'épuiser la batterie **si l'appareil est utilisé dans une voiture dont la clé de contact ne possède pas de position accessoires.** Pour éviter d'épuiser la batterie, **régler l'interrupteur POWER SELECT sur le socle de l'appareil sur la position ⓑ, puis appuyer sur la touche de réinitialisation.** L'éclairage est réglé pour rester éteint quand l'appareil n'est pas utilisé.

Remarque

Quand l'interrupteur POWER SELECT est réglé sur la position ⓑ, l'avertisseur du panneau avant ne fonctionne pas.

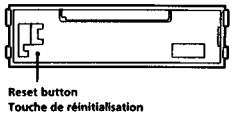

Change the position with a jeweler's screwdriver, etc.
Changer la position avec un tournevis de joaillier ou un objet similaire.

Reset Button

When the installation and connections are over, be sure to press the reset button with a ball-point pen etc.

Touche de réinitialisation

Quand l'installation et les connexions sont terminées, appuyer sur la touche de réinitialisation avec un stylo bille ou un objet pointu.



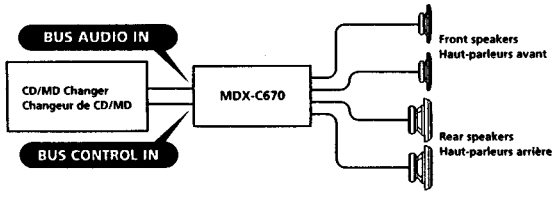
Connection Diagram

For connecting two or more changers, the source selector XA-C30 (optional) and the BUS cable RC-61 (1 m) or RC-62 (2 m) (optional) are necessary.

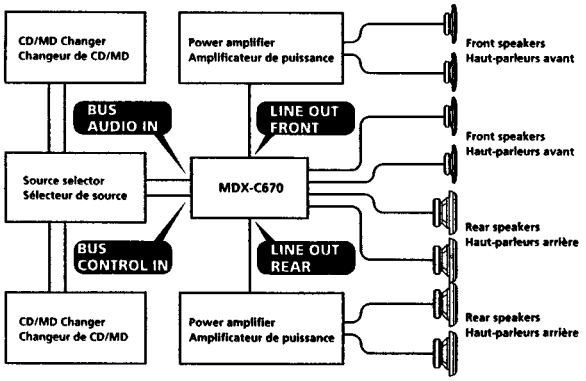
Schémas de connexion

Pour le raccordement de deux ou plusieurs changeurs, vous devez utiliser le sélecteur de source XA-C30 (optionnels) et le câble BUS RC-61 (1 m) ou RC-62 (2 m) (optionnels).

Example 1/Exemple 1

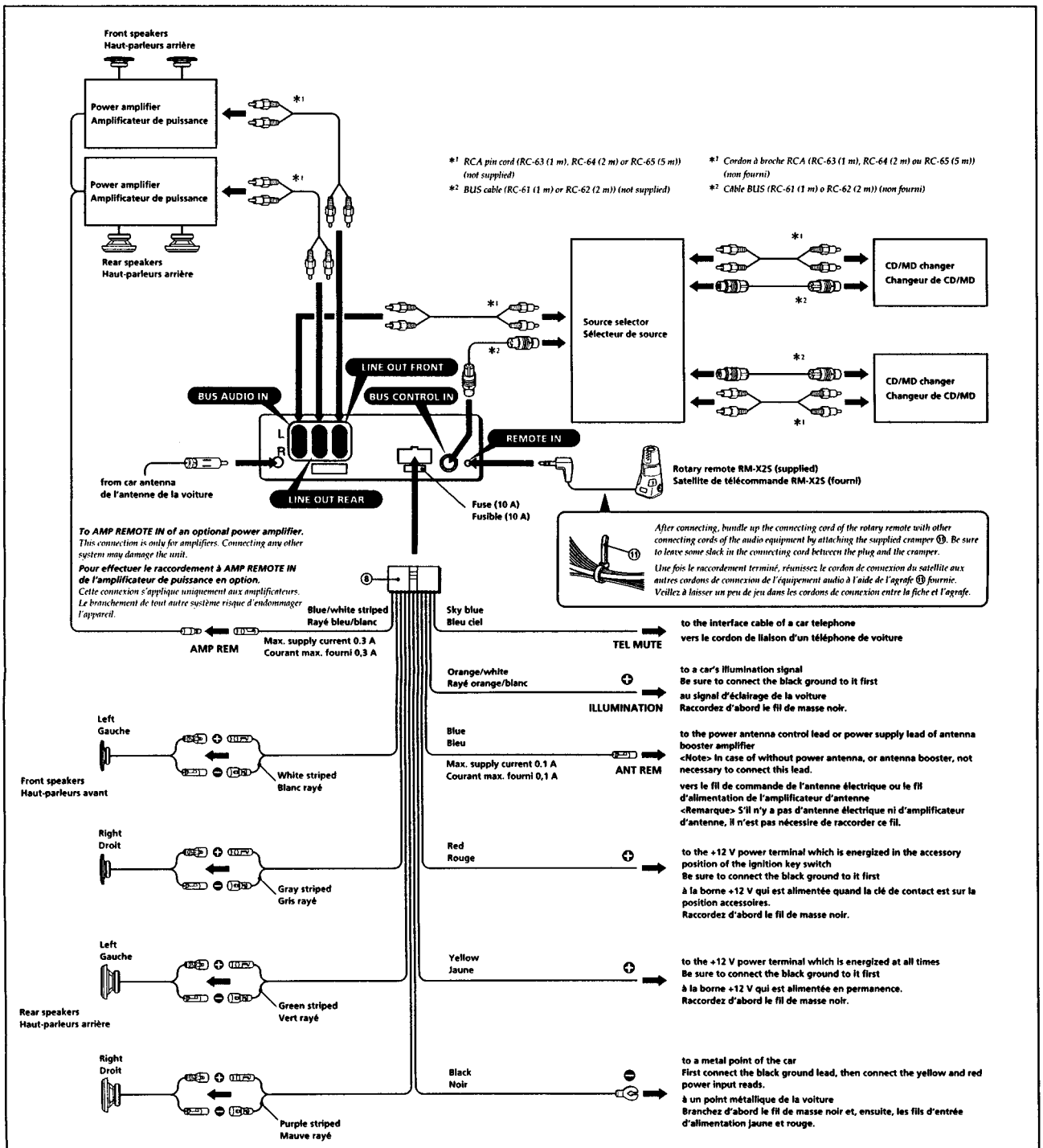


Example 2/Exemple 2



Connection Example

Connexions de l'exemple


Front speakers
Haut-parleurs arrière
Power amplifier
Amplificateur de puissance
Power amplifier
Amplificateur de puissance
Rear speakers
Haut-parleurs arrière
*1 RCA pin cord (RC-63 (1 m), RC-64 (2 m) or RC-65 (5 m)) (not supplied)
*2 BUS cable (RC-61 (1 m) or RC-62 (2 m)) (not supplied)
*1 Cordon à broche RCA (RC-63 (1 m), RC-64 (2 m) ou RC-65 (5 m)) (non fourni)
*2 Câble BUS (RC-61 (1 m) o RC-62 (2 m)) (non fourni)
Source selector
Sélecteur de source
CD/MD changer
Changeur de CD/MD
CD/MD changer
Changeur de CD/MD
LINE OUT FRONT
BUS AUDIO IN
BUS CONTROL IN
REMOTE IN
LINE OUT REAR
from car antenna
de l'antenne de la voiture
Fuse (10 A)
Fusible (10 A)
Rotary remote RM-X2S (supplied)
Satellite de télécommande RM-X2S (fourni)
After connecting, bundle up the connecting cord of the rotary remote with other connecting cords of the audio equipment by attaching the supplied cramper ⑪. Be sure to leave some slack in the connecting cord between the plug and the cramper.
Une fois le raccordement terminé, réunissez le cordon de connexion du satellite aux autres cordons de connexion de l'équipement audio à l'aide de l'agrafe ⑪ fournie. Veillez à laisser un peu de jeu dans les cordons de connexion entre la fiche et l'agrafe.
To AMP REMOTE IN of an optional power amplifier.
This connection is only for amplifiers. Connecting any other system may damage the unit.
Pour effectuer le raccordement à AMP REMOTE IN de l'amplificateur de puissance en option.
Cette connexion s'applique uniquement aux amplificateurs. Le branchement de tout autre système risque d'endommager l'appareil.
Blue/white striped
Rayé bleu/blanc
AMP REM
Max. supply current 0.3 A
Courant max. fourni 0,3 A
Sky blue
Bleu ciel
TEL MUTE
to the interface cable of a car telephone
vers le cordon de liaison d'un téléphone de voiture
Orange/white
Rayé orange/blanc
ILLUMINATION
to a car's illumination signal
Be sure to connect the black ground to it first
au signal d'éclairage de la voiture
Raccordez d'abord le fil de masse noir.
Left
Gauche
Front speakers
Haut-parleurs avant
White striped
Blanc rayé
Blue
Bleu
Max. supply current 0.1 A
Courant max. fourni 0,1 A
ANT REM
to the power antenna control lead or power supply lead of antenna booster amplifier
<Note> In case of without power antenna, or antenna booster, not necessary to connect this lead.
vers le fil de commande de l'antenne électrique ou le fil d'alimentation de l'amplificateur d'antenne
<Remarque> S'il n'y a pas d'antenne électrique ni d'amplificateur d'antenne, il n'est pas nécessire de raccorder ce fil.
Right
Droit
Gray striped
Gris rayé
Red
Rouge
to the +12 V power terminal which is energized in the accessory position of the ignition key switch
Be sure to connect the black ground to it first
à la borne +12 V qui est alimentée quand la clé de contact est sur la position accessoires.
Raccordez d'abord le fil de masse noir.
Left
Gauche
Rear speakers
Haut-parleurs arrière
Green striped
Vert rayé
Yellow
Jaune
to the +12 V power terminal which is energized at all times
Be sure to connect the black ground to it first
à la borne +12 V qui est alimentée en permanence.
Raccordez d'abord le fil de masse noir.
Right
Droit
Purple striped
Mauve rayé
Black
Noir
to a metal point of the car
First connect the black ground lead, then connect the yellow and red power input reads.
à un point métallique de la voiture
Branchez d'abord le fil de masse noir et, ensuite, les fils d'entrée d'alimentation jaune et rouge.

Notes on the control leads

- *The power antenna control lead (blue) supplies +12 V DC when you turn on the tuner.*
- *A power antenna without relay box cannot be used with this unit.*

Memory hold connection

When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition key is turned off.

Notes on speaker connection

- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.*
- *Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Therefore, be sure to connect passive speakers to these terminals.*

Remarques sur les fils de contrôle

- *Le fil de contrôle de l'antenne électrique (bleu) fournit une tension continue de +12 V quand vous mettez l'appareil sous tension.*
- *Une antenne électrique sans boîtier de relais ne peut pas être utilisée avec cet appareil.*

Connexion pour la conservation de la mémoire

Lorsque le fil d'entrée d'alimentation jaune est connecté, le circuit de la mémoire est alimenté en permanence même si la clé de contact est sur la position d'arrêt.

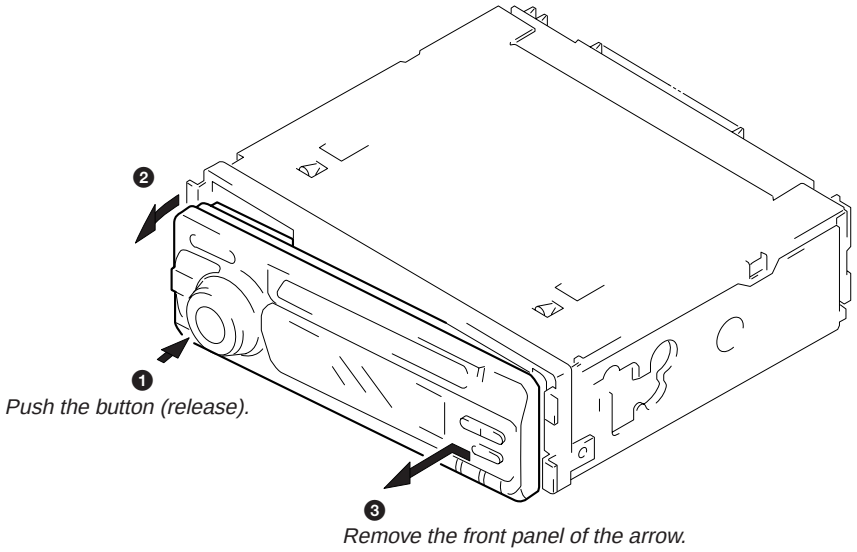
Remarques sur la connexion des haut-parleurs

- *Avant de raccorder les haut-parleurs, mettre l'appareil hors tension.*
- *Utiliser des haut-parleurs ayant une impédance de 4 à 8 ohms et une capacité adéquate sous peine de les endommager.*
- *Ne pas raccorder les bornes du système de haut-parleurs au châssis de la voiture et ne pas connecter les bornes du haut-parleur droit à celles du haut-parleur gauche.*
- *Ne pas tenter de raccorder les haut-parleurs en parallèle.*
- *Ne pas raccorder des haut-parleurs actifs (avec amplificateurs intégrés) aux bornes de haut-parleur de l'appareil sous peine de les endommager. Veiller à raccorder des haut-parleurs passifs à ces bornes.*

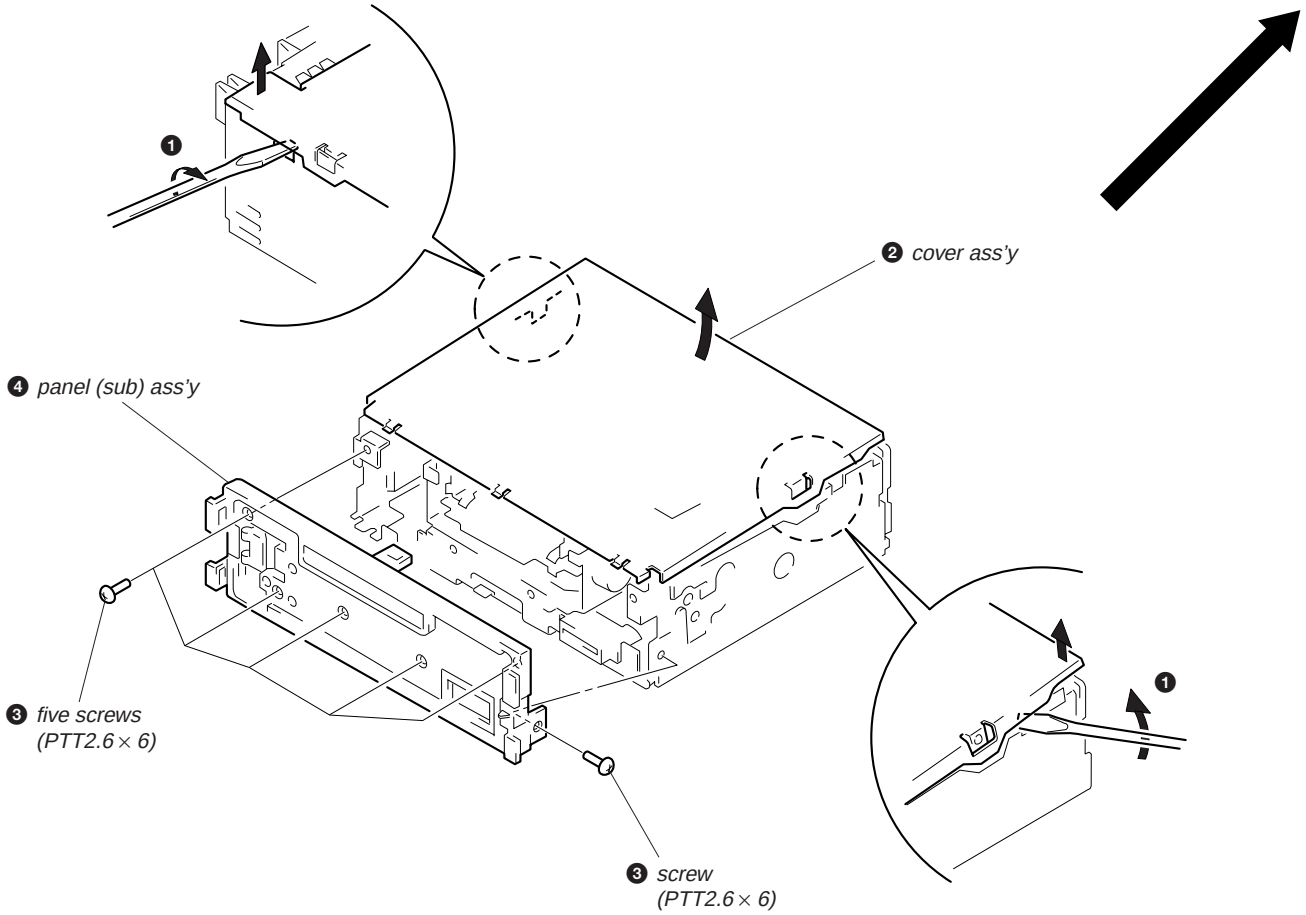
SECTION 3
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

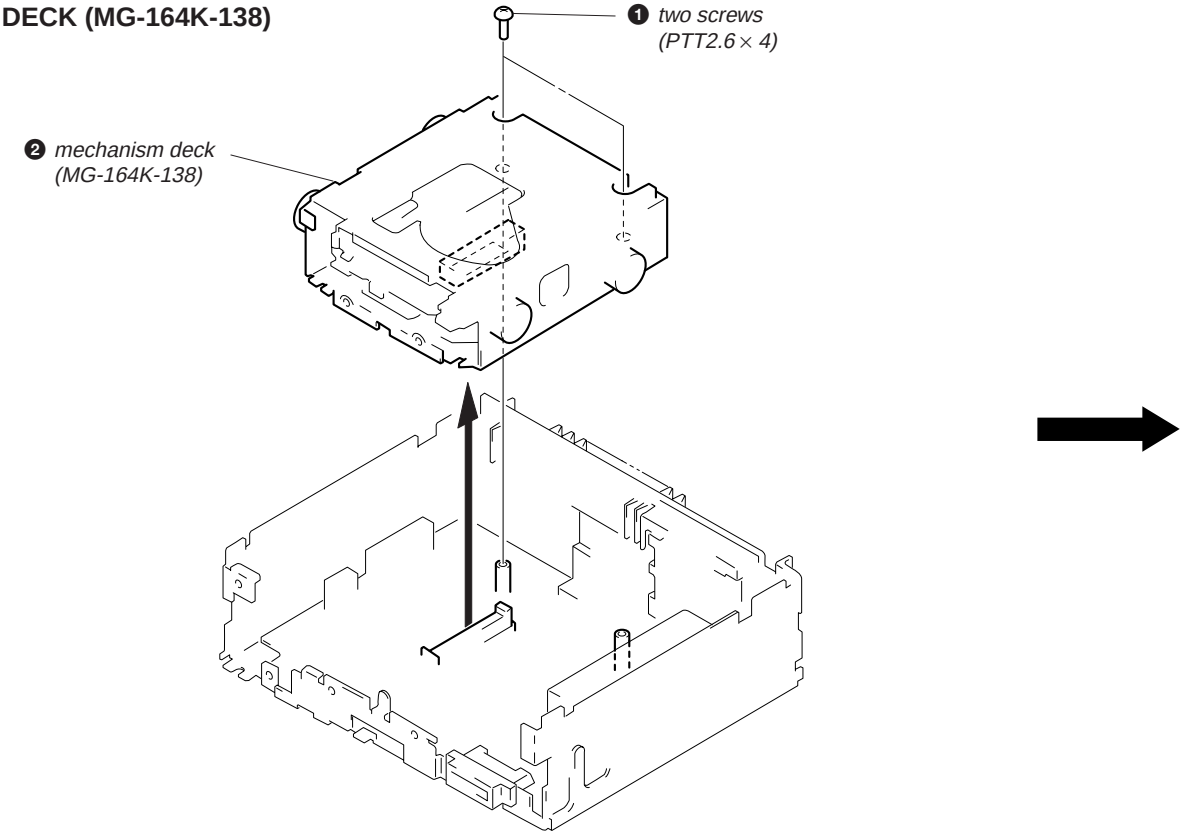
FRONT PANEL



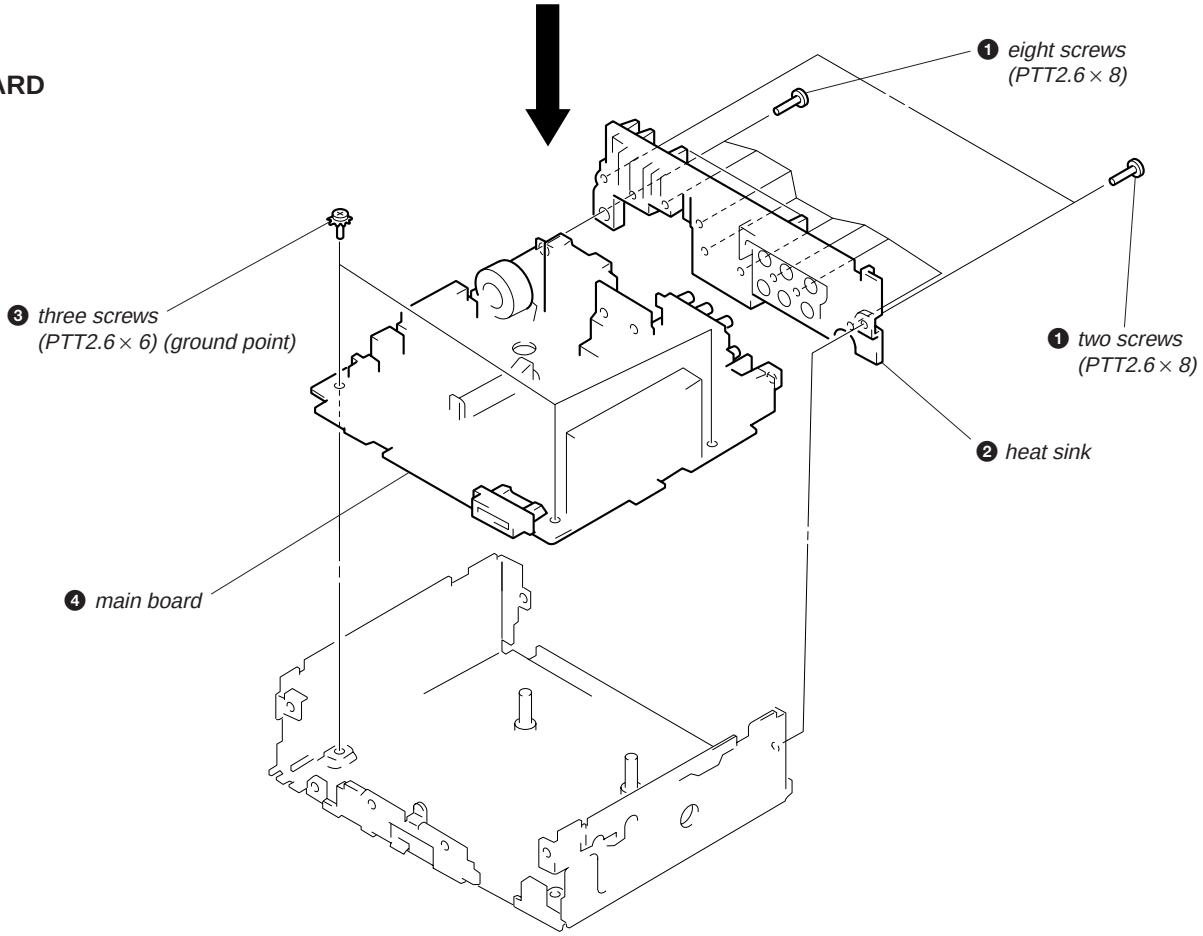
COVER ASS'Y, PANEL (SUB) ASS'Y



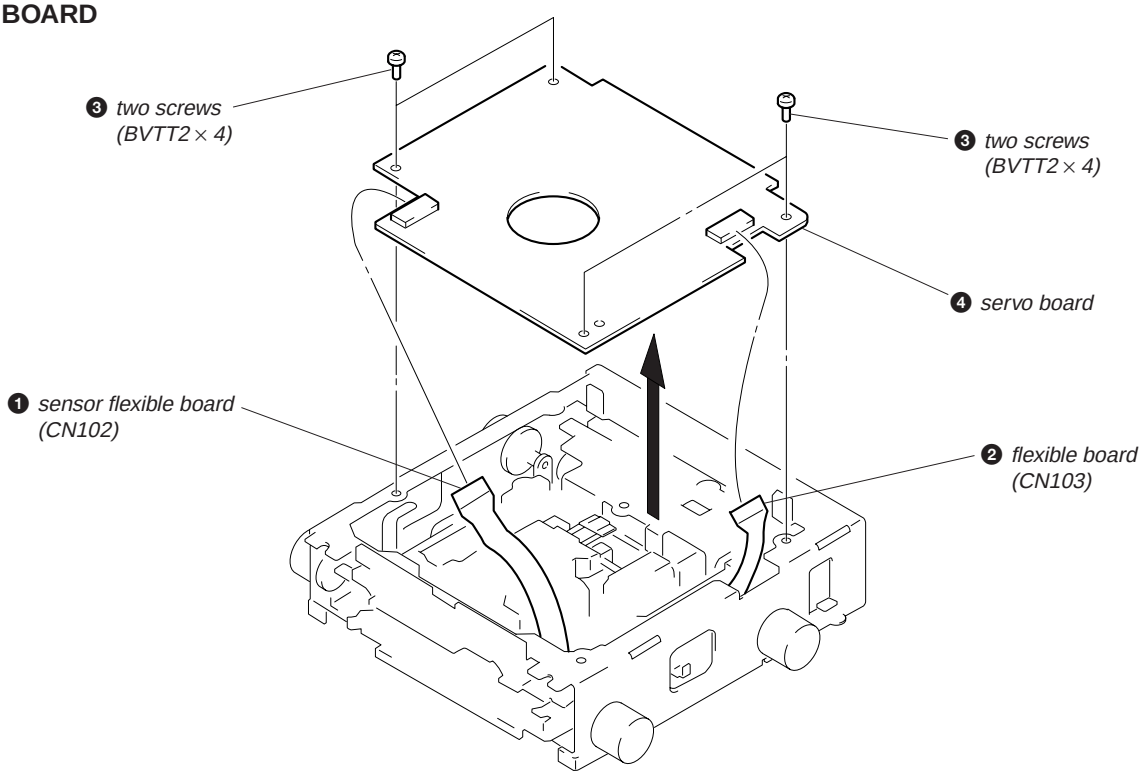
MECHANISM DECK (MG-164K-138)



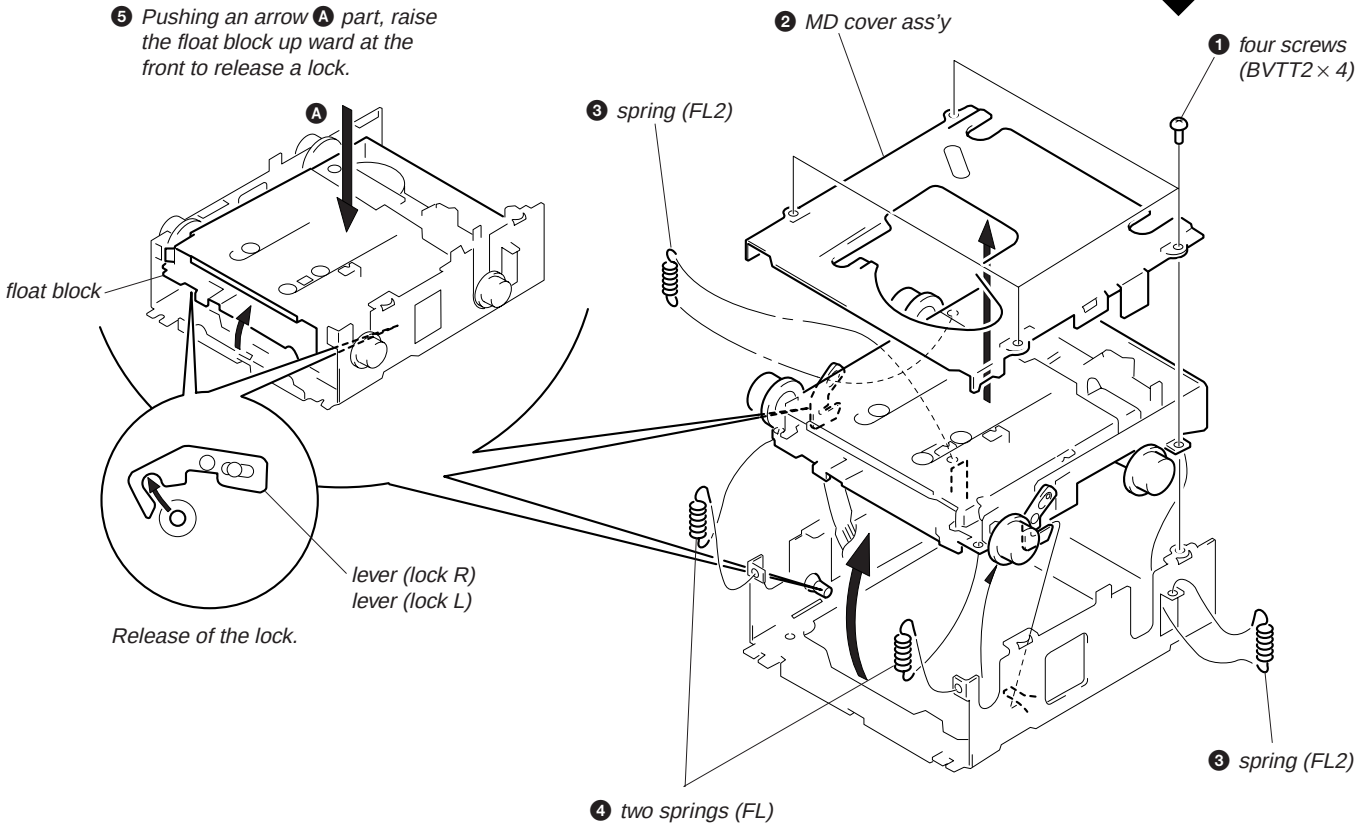
MAIN BOARD



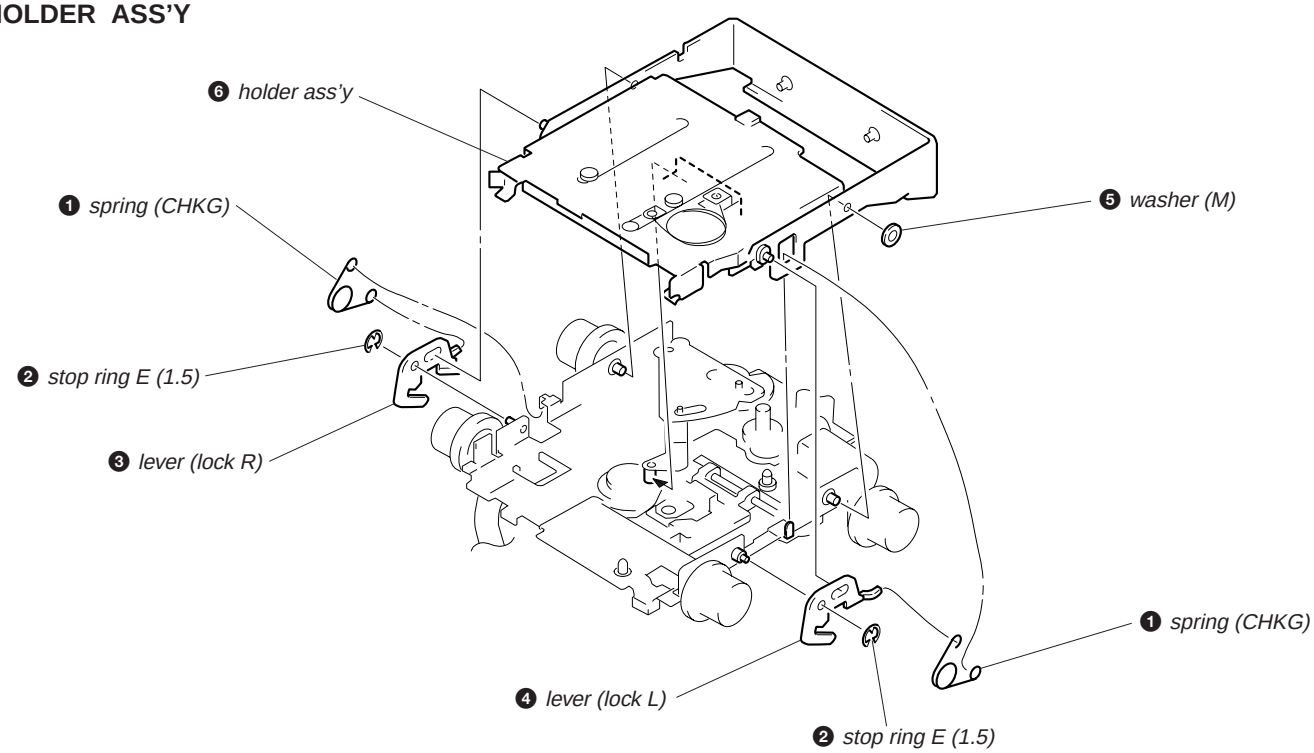
SERVO BOARD



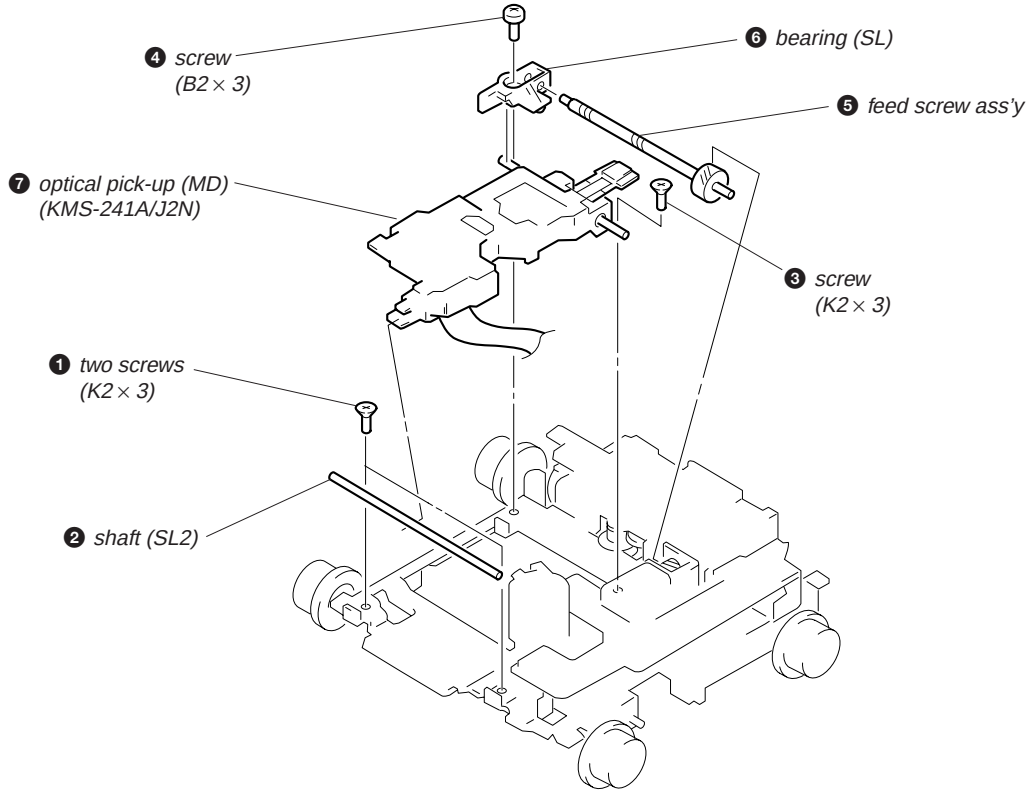
FLOAT BLOCK


❺ Pushing an arrow Ⓐ part, raise the float block up ward at the front to release a lock.
Ⓐ
float block
lever (lock R)
lever (lock L)
Release of the lock.
❷ MD cover ass'y
❶ four screws (BVTT2 × 4)
❸ spring (FL2)
❸ spring (FL2)
❹ two springs (FL)

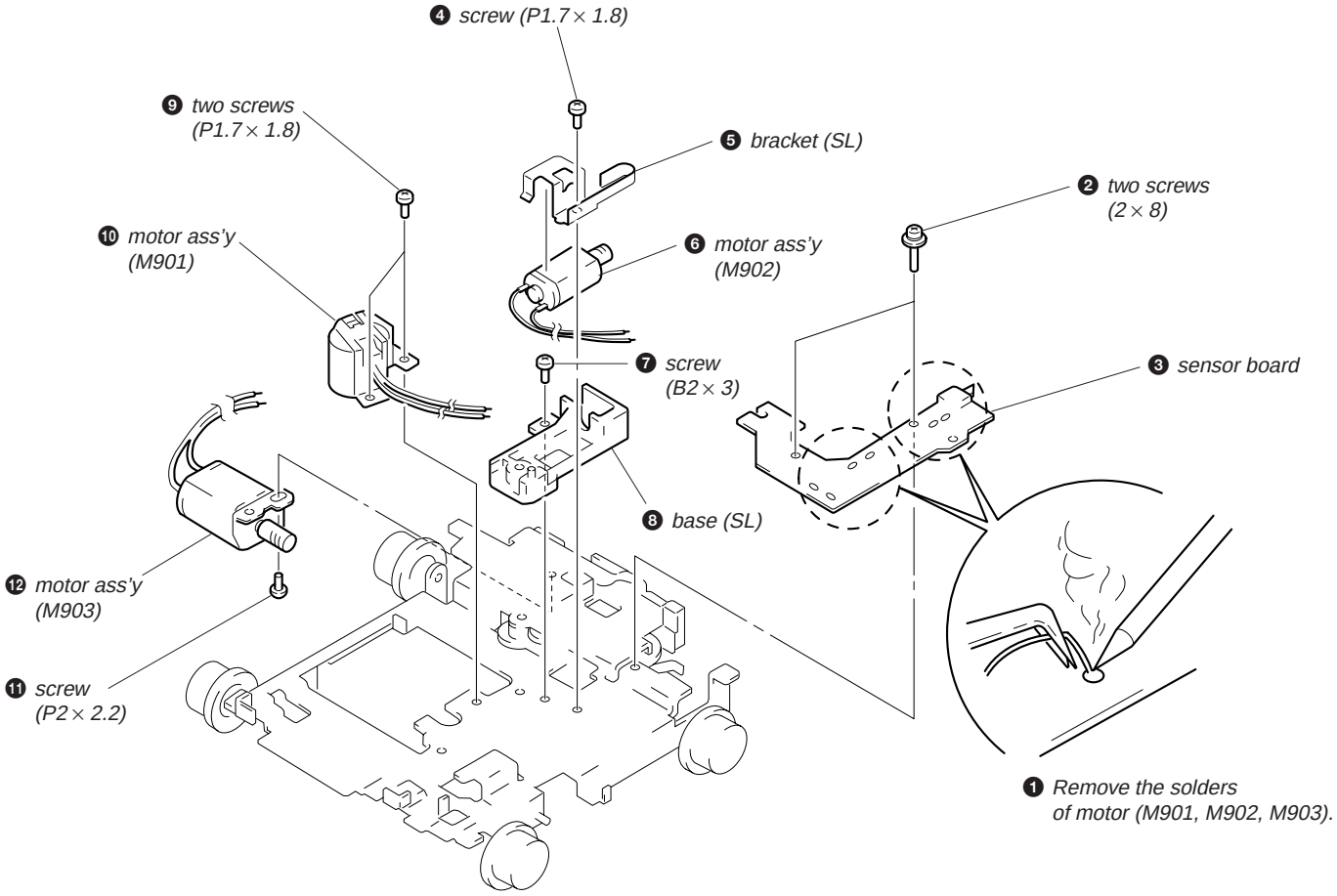
HOLDER ASS'Y



OPTICAL PICK-UP (MD) (KMS-241A/J2N)



MOTOR ASS'Y (M901, M902, M903), SENSOR BOARD


❹ screw (P1.7 × 1.8)
❾ two screws (P1.7 × 1.8)
❺ bracket (SL)
❷ two screws (2 × 8)
❿ motor ass'y (M901)
❻ motor ass'y (M902)
❼ screw (B2 × 3)
❸ sensor board
❽ base (SL)
⓬ motor ass'y (M903)
⓫ screw (P2 × 2.2)
❶ Remove the solders of motor (M901, M902, M903).

SECTION 4
ELECTRICAL ADJUSTMENTS

TEST MODE

This set have the test mode function. In the test mode, FM Auto Scan/Stop Level and AM (MW) Auto Scan/Stop Level adjustments can be performed easier than it in ordinary procedure.

<Set the Test Mode>
1. Set the "power select" switch (S702) is "ON" position.
2. Turn ON the regulated power supply. (All LEDs on the set lights up, and the clock is displayed.)

Note: Press the [OFF] button, if the clock is not displayed.

3. Push the preset [4] button.
4. Push the preset [5] button.
5. Press the preset [1] button for more than two seconds.
6. Then the display indicates all lights, the test mode is set.

<Release the Test mode>
1. Push the [OFF] button.

MD SECTION

MD section adjustments are done automatically in this set.

TUNER SECTION

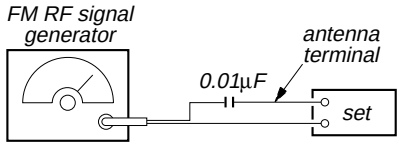
0dB=1µV

Cautions during repair
When the tuner unit is defective, replace it by a new one because its internal block is difficult to repair.

FM Auto Scan/Stop Level Adjustment

Setting:

[SOURCE] button: FM

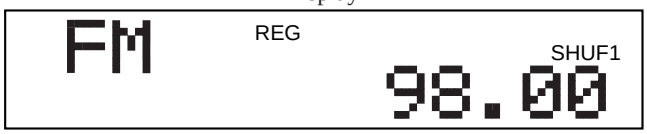


Carrier frequency : 98.0 MHz
Output level : 22 dB (12.6 µV)
Mode : mono
Modulation : 1 kHz, 22.5 kHz deviation (30%)

Procedure:

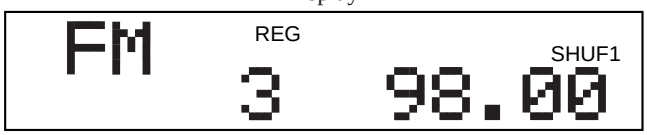
1. Set to the test mode. (See page 12).
2. Push the [SOURCE] button and set to FM.

Display



3. Push the preset [3] button.

Display



4. Adjust with the volume RV2 on TU1 so that the "FM" indication turns to "FM0" indication on the display window.
   But, in case of already indicated "FM0", turn the RV2 so that put out light "0" indication and adjustment.

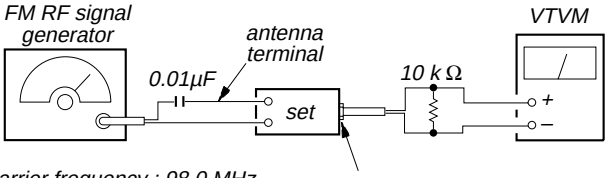
Display

Adjustment Location: See page 14.

FM Stereo Separation Adjustment

Setting:

[SOURCE] button: FM



Carrier frequency : 98.0 MHz
Output level : 70 dB (3.2 mV)
Mode : stereo
Modulation : main: 1 kHz, 33.75 kHz deviation (45%)
sub: 1 kHz, 33.75 kHz deviation (45%)
19 kHz pilot: 7.5 kHz deviation (10%)

Procedure:

FM Stereo signal generator output channel	Level meter connection	Level meter reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV4 on TU1 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV4 on TU1 for minimum reading.

L-CH Stereo separation: Ⓐ-Ⓑ
R-CH Stereo separation: Ⓒ-Ⓓ
The separations of both channels should be equal.

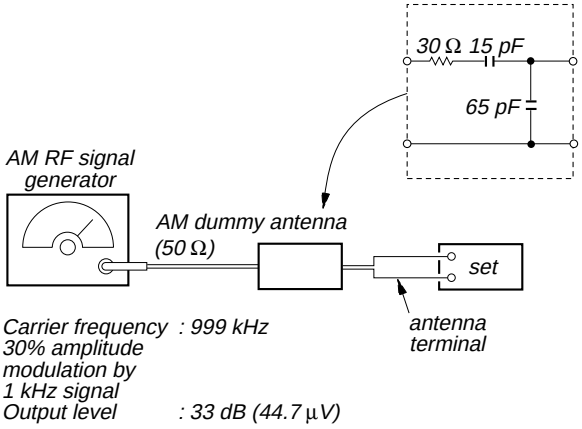
Specification: Separation more than 30dB

Adjustment Location: See page 14.

AM (MW) Auto Scan/Stop Level Adjustment

Setting:

SOURCE button (MDX-C670) : AM
SOURCE button (MDX-C670RDS): MW

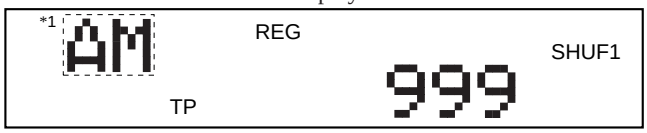


Carrier frequency : 999 kHz
30% amplitude modulation by 1 kHz signal
Output level : 33 dB (44.7 µV)

Procedure:

1. Set to the test mode. (See page 12.)
2. Push the SOURCE button and set to AM (MDX-C670) or MW (MDX-C670RDS).

Display

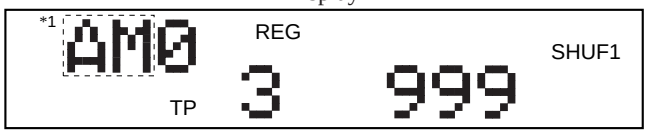


3. Push the preset 3 button.

Display

4. Adjust with the volume RV1 on TU1 so that the “AM” or “MW” indication turns to “AM0” or “MW0” indication on the display window.
   But, in case of already indicated “AM0” or “MW0”, turn the RV1 so that put out light “0” indication and adjustment.

Display



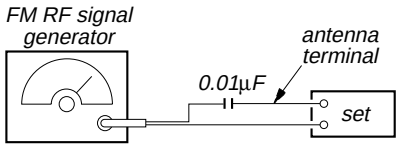
*1 : MDX-C670RDS is indicates “MW”.

Adjustment Location: See page 14.

RDS S-Meter Adjustment (MDX-C670RDS)

Setting:

SOURCE button: FM

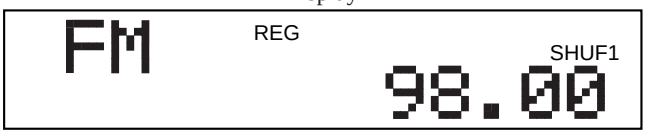


Carrier frequency : 98.0 MHz
Output level : 35 dB (56.2 µV)
Mode : mono
Modulation : no modulation

Procedure:

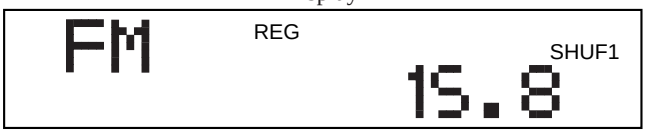
1. Set to the test mode. (See page 12.)
2. Push the SOURCE button and set to FM.

Display



3. Push the preset 10 button.
4. Adjust RV1 on MAIN board so that the display indication is “15.8”.

Display

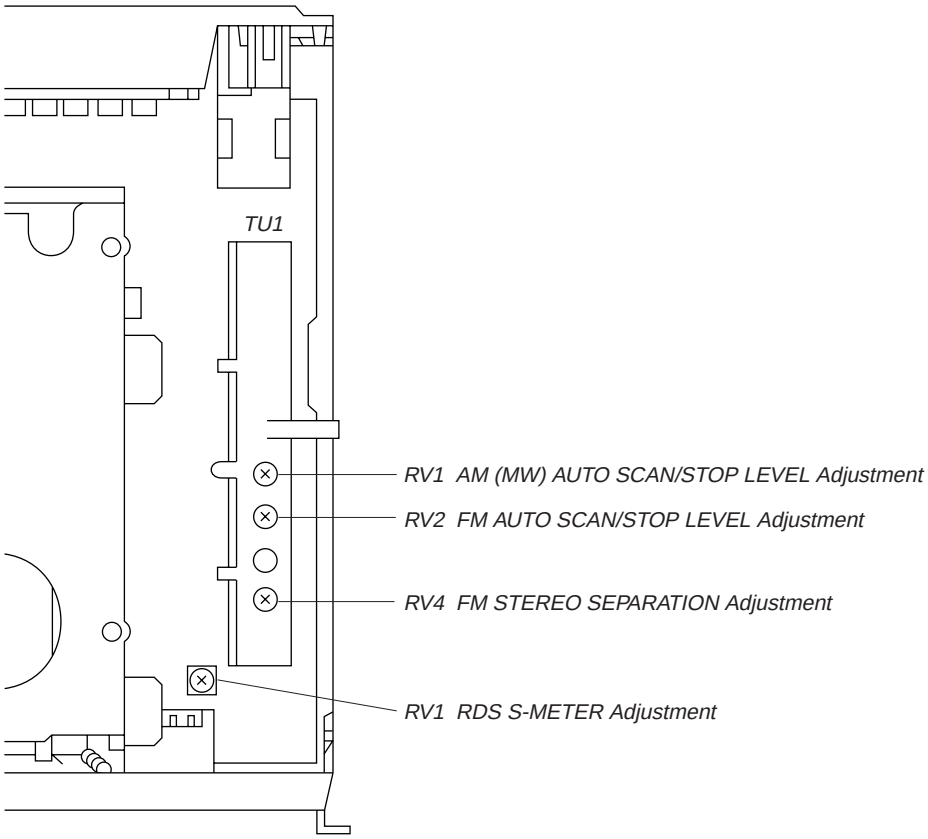


Specification: Display indication : 15.6 to 16.4

Adjustment Location: See page 14.

Adjustment Location:

– SET UPPER VIEW –


TU1
RV1 AM (MW) AUTO SCAN/STOP LEVEL Adjustment
RV2 FM AUTO SCAN/STOP LEVEL Adjustment
RV4 FM STEREO SEPARATION Adjustment
RV1 RDS S-METER Adjustment

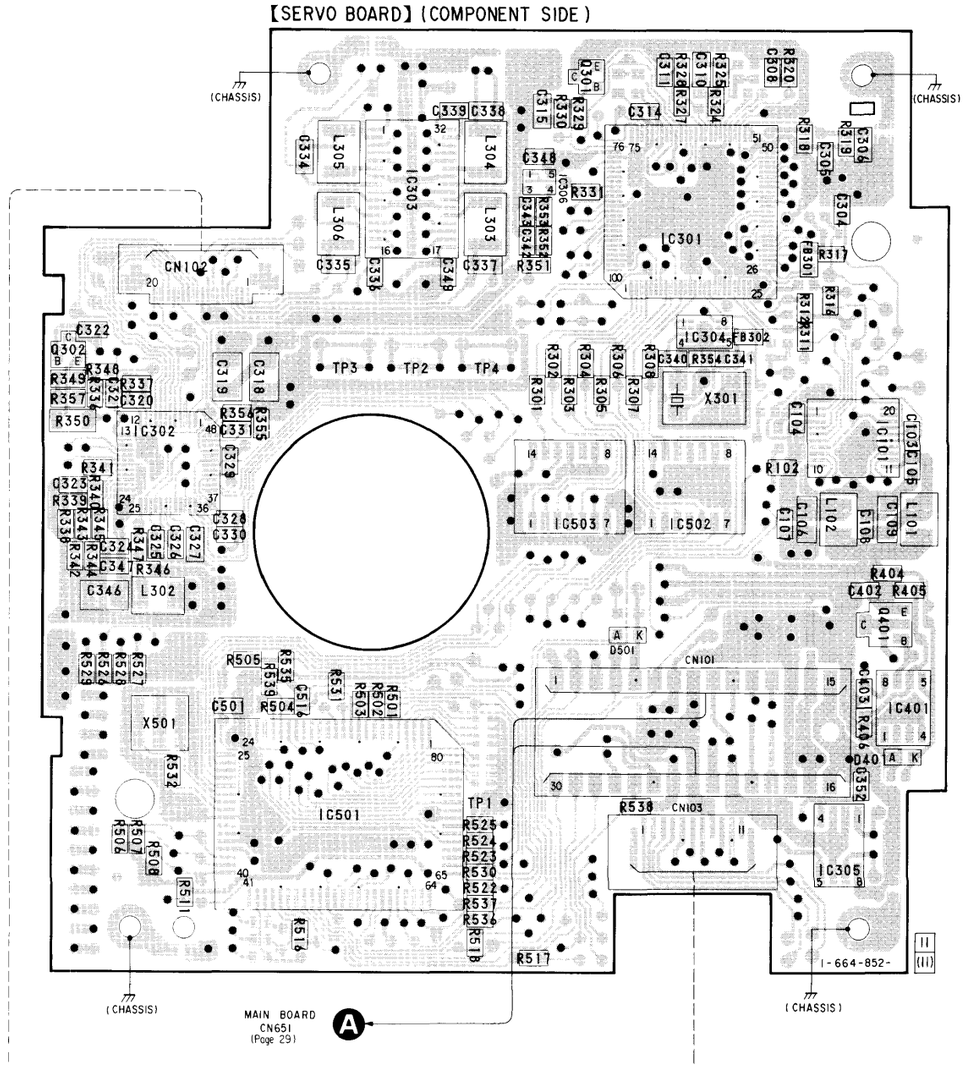
SECTION 5
DIAGRAMS

5-1. PRINTED WIRING BOARDS – MD Section –

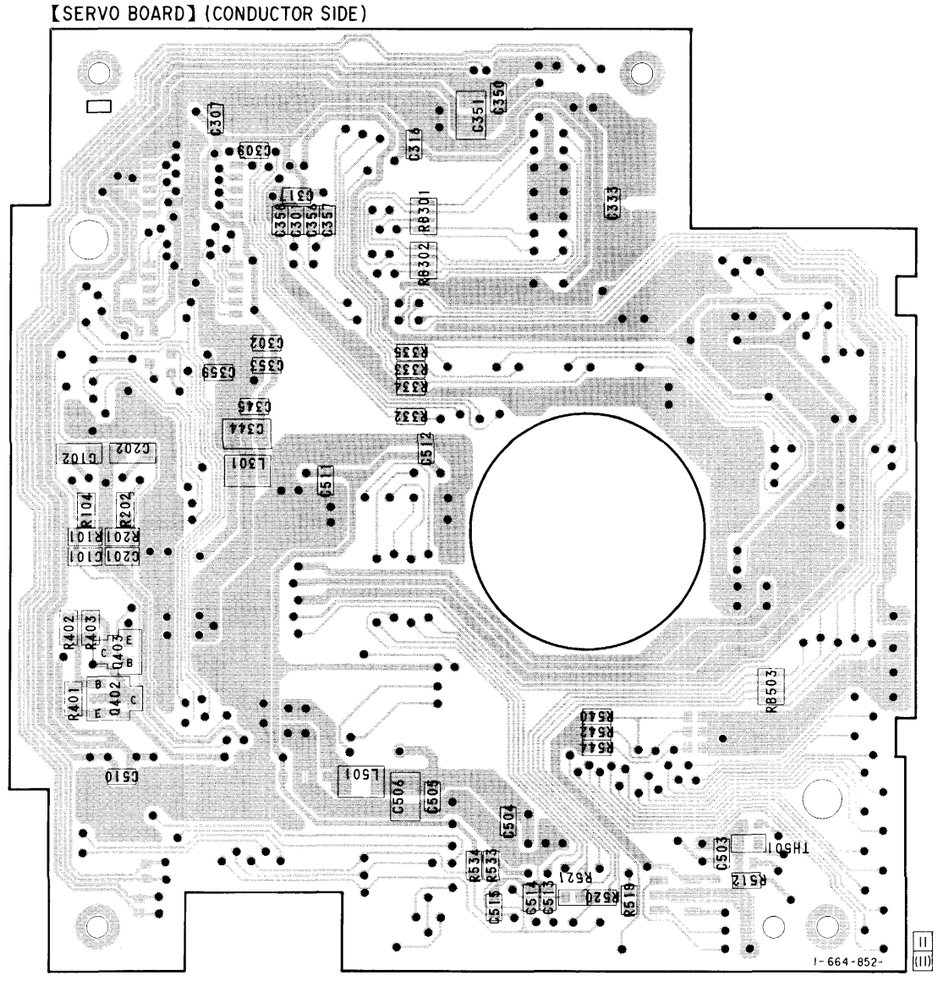
• **Semiconductor Location**

Ref. No.	Location
D401	E-6
D501	E-4
IC101	C-6
IC301	B-5
IC302	C-2
IC303	B-3
IC304	C-5
IC305	F-6
IC306	B-4
IC401	E-6
IC501	F-3
IC502	D-5
IC503	D-4
Q301	A-4
Q302	C-1
Q401	D-6
Q402	E-7
Q403	E-7

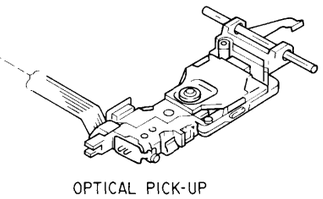
【SERVO BOARD】(COMPONENT SIDE)



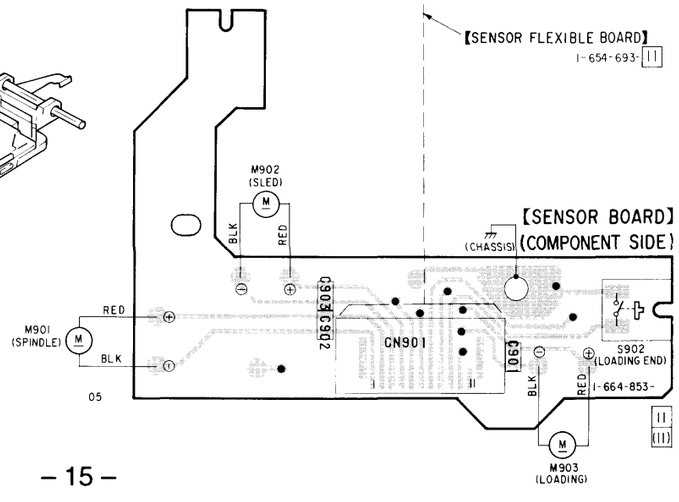
【SERVO BOARD】(CONDUCTOR SIDE)



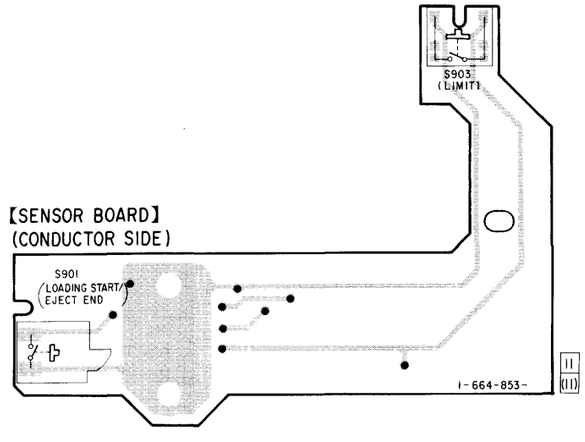
【SENSOR FLEXIBLE BOARD】
I-654-693-



OPTICAL PICK-UP
(KMS-241A)



【SENSOR BOARD】
(CONDUCTOR SIDE)



Note:
- ● : Through hole.
- ▒ : Pattern from the side which enables seeing.

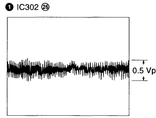
(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

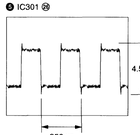
5-2. SCHEMATIC DIAGRAM – MD Section –

• Waveforms

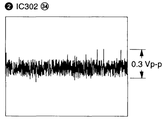
❶ IC302 ㉙



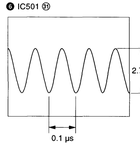
❷ IC301 ㊽



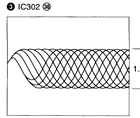
❸ IC302 ㊿



❹ IC501 ⑪



❺ IC302 ㊾



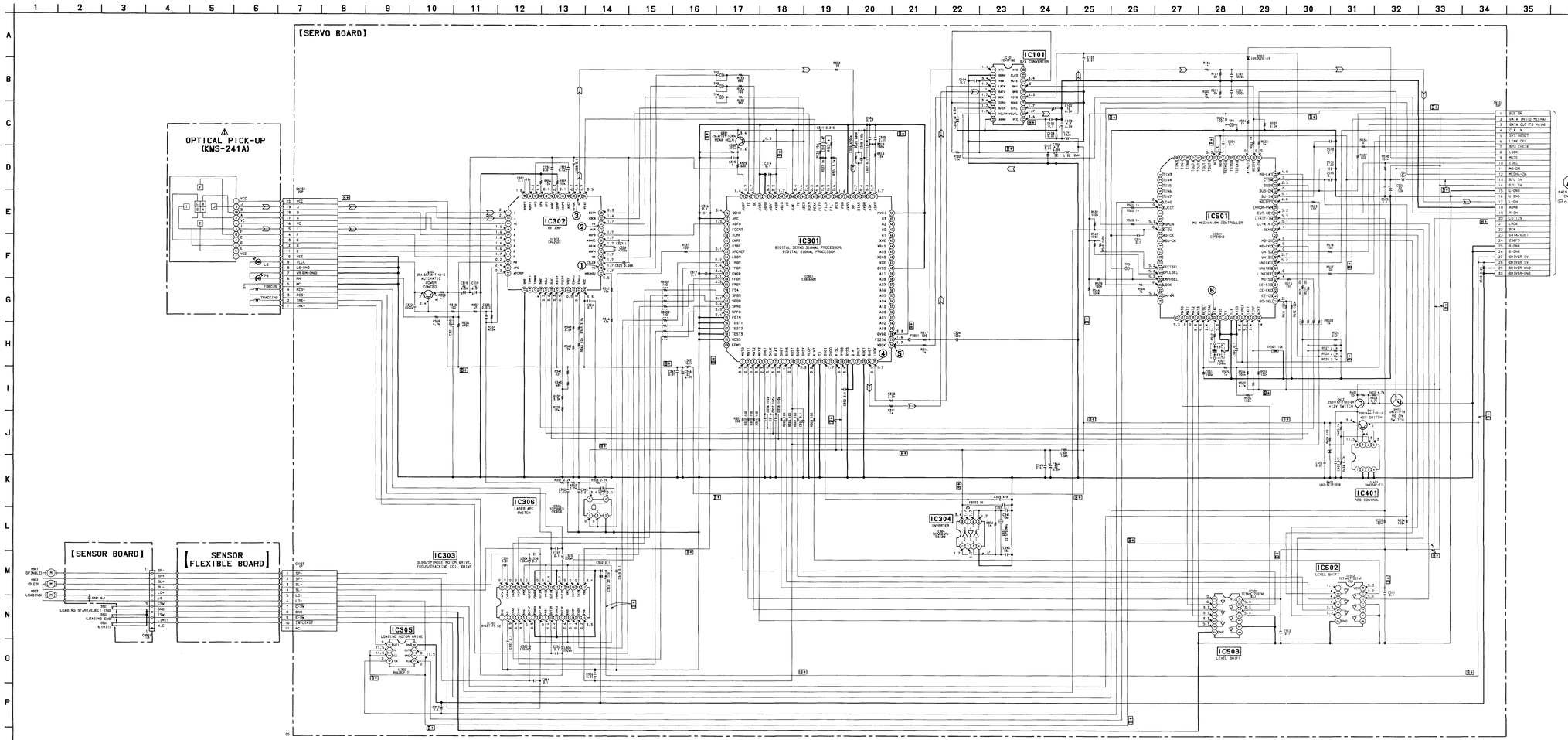
❻ IC301 ㉘

Note:

- All capacitors are in µF unless otherwise noted. pF: µµF. 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- △ : internal component.

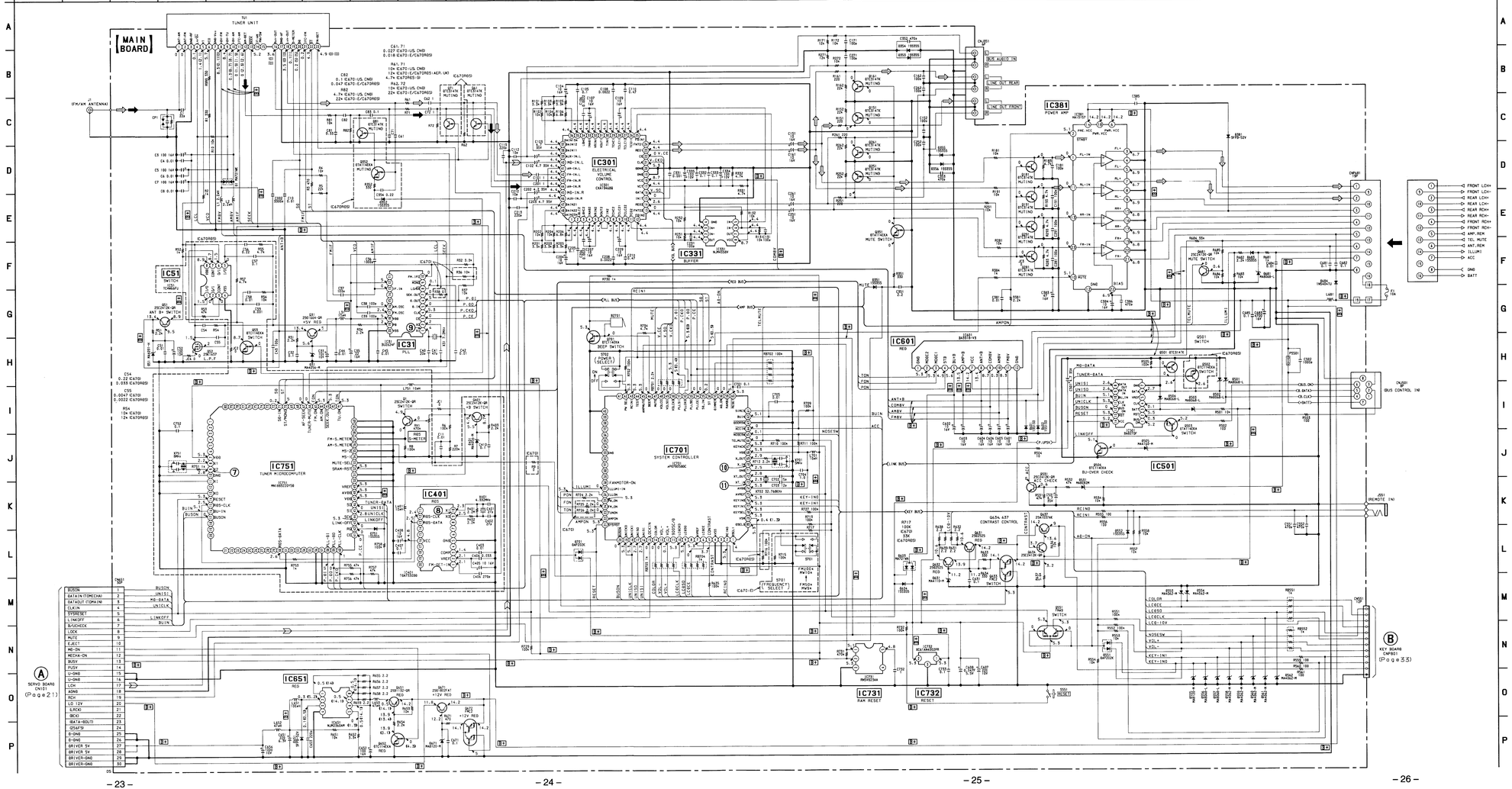
Note:	Note:
The components identified by mark △ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- B+ : B+ Line.
- Power voltage is dc 14.4 V and fed with regulated dc power supply from BATT and ACC terminals.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : MD
  * : Impossible to measure
- Voltages are taken with a VOM (10 MΩ/V). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ▷ : MD



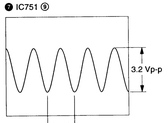
5-3. SCHEMATIC DIAGRAM – MAIN Section –

SEE ADDITIONAL INFORMATION

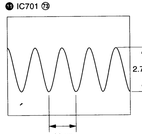


• Waveforms

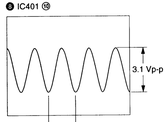
❷ IC751 ⑧



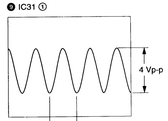
⑩ IC701 ㉘



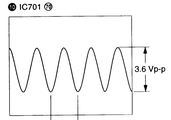
❸ IC401 ⑯



❶ IC31 ①



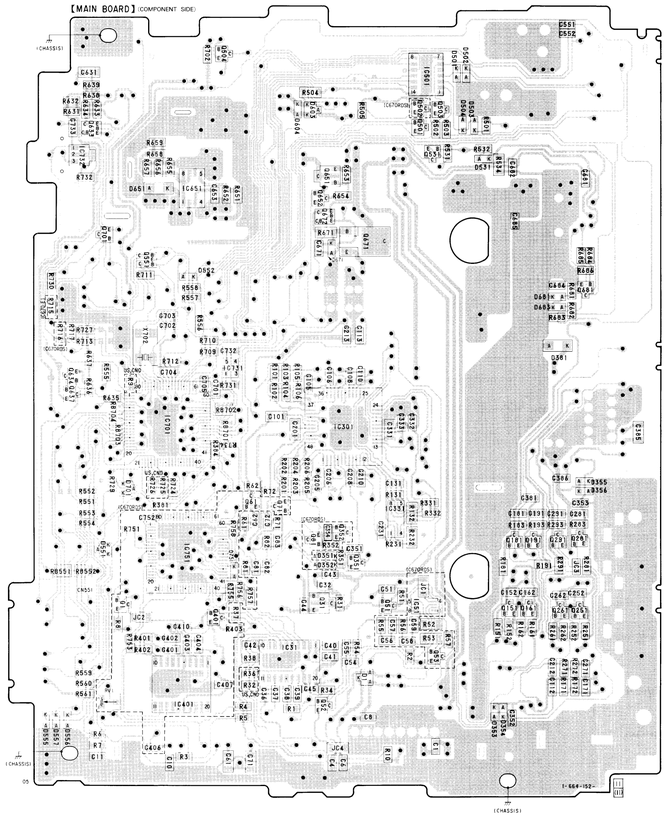
⑩ IC701 ㉘

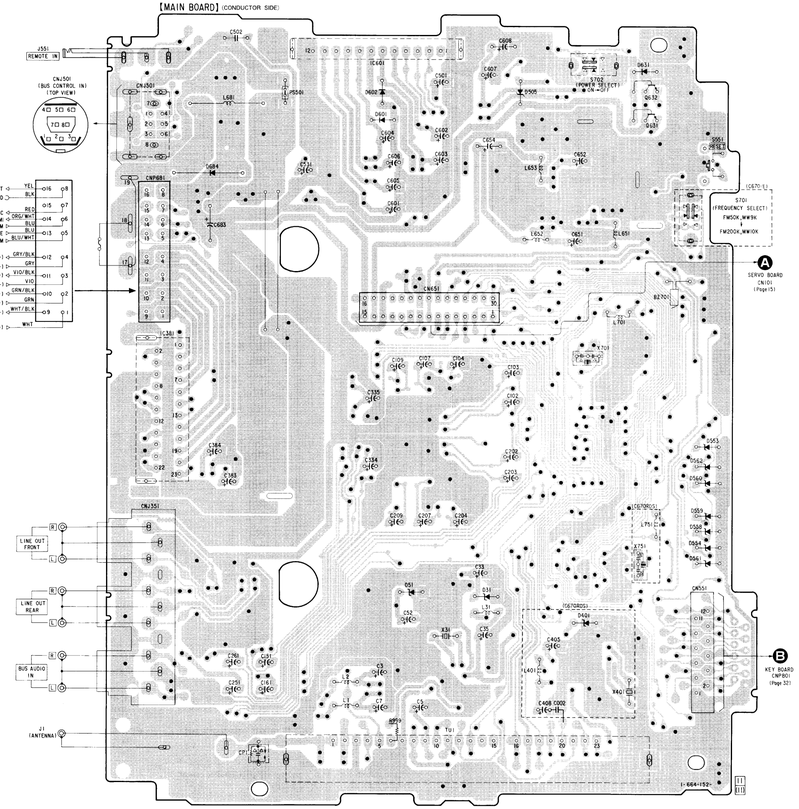


Note:

- All capacitors are in µF unless otherwise noted. pF: µµF
  50 WV or less are not indicated except for electrolytics and tantaliums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- △ : internal component.
- B + : B+ Line.
- ▭ : panel designation.
- ▬ : adjustment for repair.
- Power voltage is dc 14.4 V and fed with regulated dc power supply from BATT and ACC terminals.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : AM (MW)
  << >> : MD
  * : Impossible to measure
- Voltages are taken with a VOM (10 MΩ/V).
  Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM
  ➡ : AM (MW)
  ⇨ : MD
- Abbreviation
  CND : Canadian
  G : German

SEE ADDITIONAL INFORMATION





• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D1	J-6	D651	C-3	Q151	I-8
D31	H-17	D671	D-5	Q161	I-8
D51	H-16	D681	E-8	Q181	H-8
D351	H-5	D683	E-8	Q191	H-8
D352	H-5	D684	C-13	Q251	I-9
D381	E-8	D701	G-3	Q261	I-8
D401	I-18	D751	H-4	Q281	H-9
D501	A-7			Q291	H-8
D502	A-7	IC31	I-5	Q351	H-6
D503	B-7	IC51	I-7	Q352	H-6
D504	B-7	IC301	F-6	Q401	I-4
D505	B-17	IC331	G-6	Q501	B-7
D531	C-7	IC381	E-13	Q502	B-7
D551	H-2	IC401	J-4	Q503	B-7
D552	D-4	IC501	B-7	Q504	A-4
D553	F-20	IC601	A-15	Q531	C-7
D554	H-20	IC651	C-4	Q551	D-3
D555	J-2	IC701	F-3	Q631	B-19
D556	J-2	IC731	E-4	Q632	B-19
D557	J-2	IC732	C-2	Q633	B-2
D558	G-20	IC751	H-4	Q634	F-2
D559	G-20			Q637	F-2
D560	G-20	Q1	I-3	Q651	C-5
D561	H-20	Q31	I-5	Q652	C-5
D562	G-20	Q51	I-6	Q671	D-6
D601	B-16	Q52	J-5	Q672	C-5
D602	B-16	Q53	I-7	Q681	D-9
D603	B-5	Q61	G-4	Q701	D-2
D604	B-5	Q71	G-5		
D631	A-19	Q81	H-5		

Note:

- ⟷ : parts extracted from the component side.
- ● : Through hole.
- △ : internal component.
- : Pattern of the rear side.

(The other layers' patterns are not indicated.)

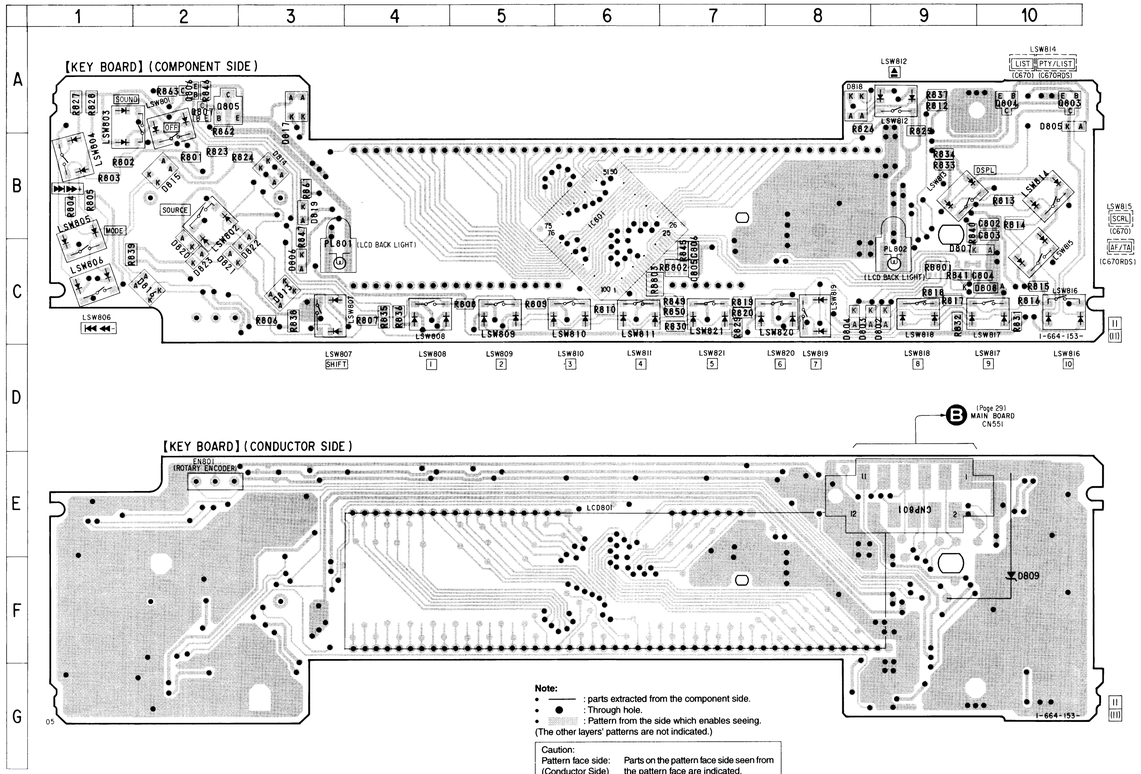
Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

SEE ADDITIONAL INFORMATION

5-5. PRINTED WIRING BOARDS – DISPLAY Section –

• Semiconductor Location

Ref. No.	Location
D802	C-9
D803	C-8
D804	C-8
D805	A-10
D806	C-3
D807	C-9
D808	C-10
D813	C-3
D814	B-3
D815	B-2
D816	C-2
D817	A-3
D818	A-8
D819	B-3
D820	C-2
D821	C-2
D822	C-3
D823	C-2
IC801	B-6
Q803	A-10
Q804	A-10
Q805	A-2
Q806	A-2
Q807	A-2



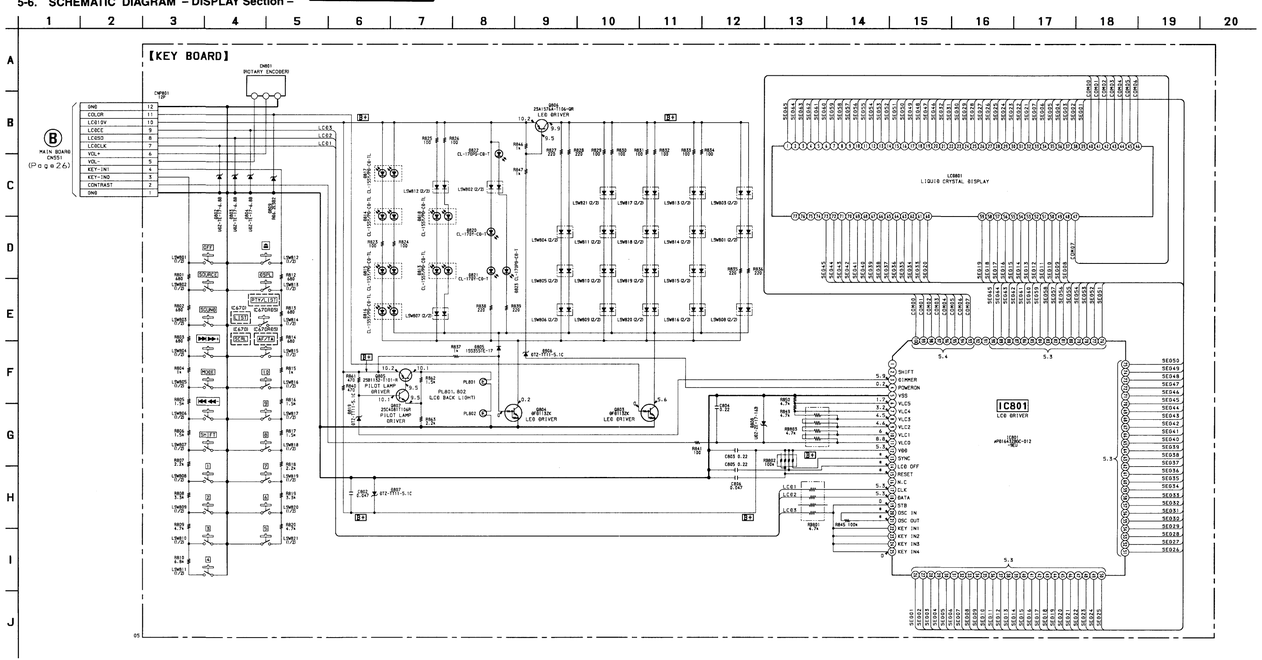
Note:
- ——— : parts extracted from the component side.
- ● : Through hole.
- ▨ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

SEE ADDITIONAL INFORMATION

5-6. SCHEMATIC DIAGRAM – DISPLAY Section –



Note:
- All capacitors are in µF unless otherwise noted. pF: µµF
  50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- B+ : B+ Line.
- : panel designation.
- Power voltage is dc 14.4 V and fed with regulated dc power supply from BATT and ACC terminals.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
- Voltages are taken with a VOM (10 MΩ/V).
  Voltage variations may be noted due to normal production tolerances.

SECTION 6
EXPLODED VIEWS

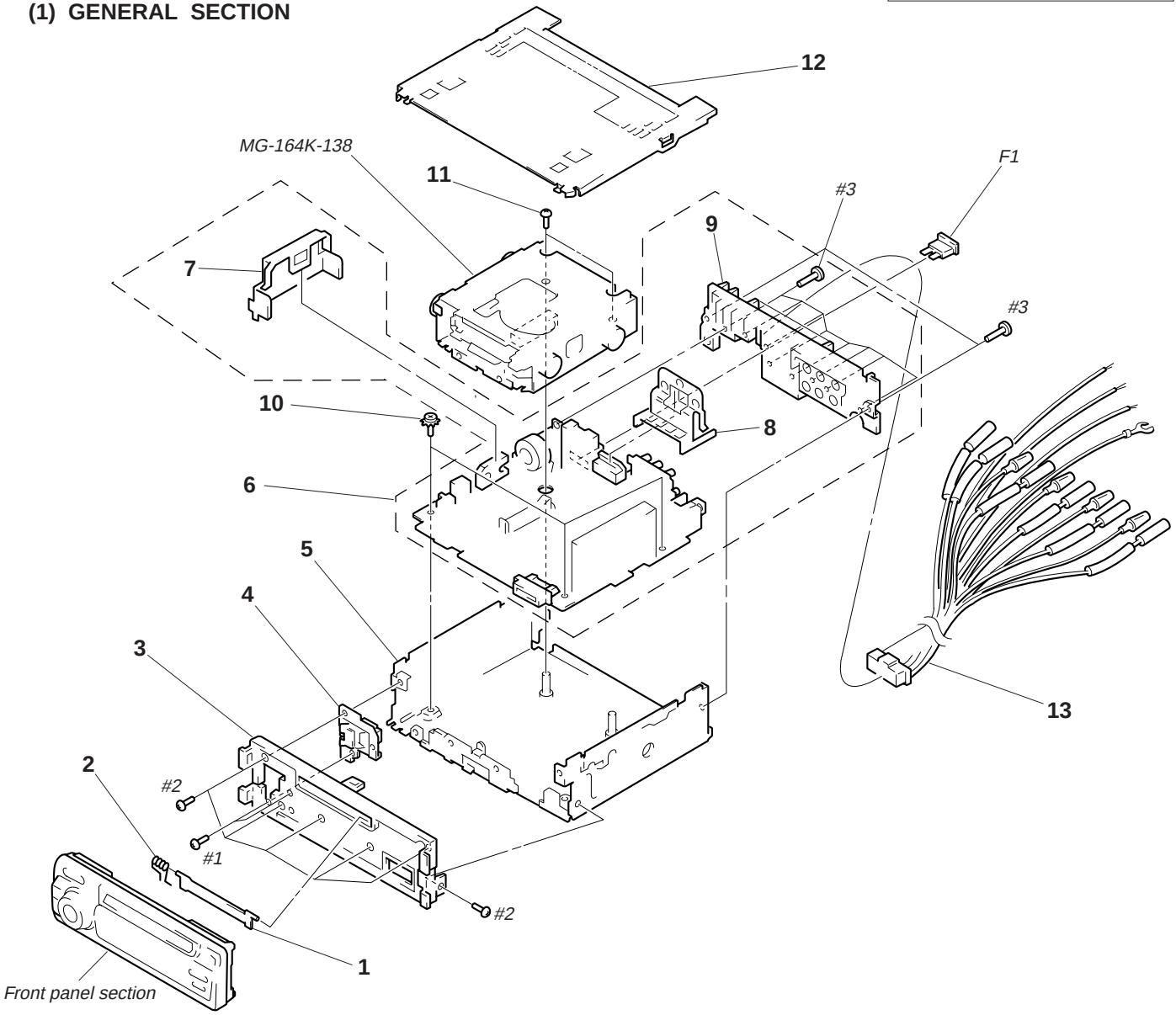
NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

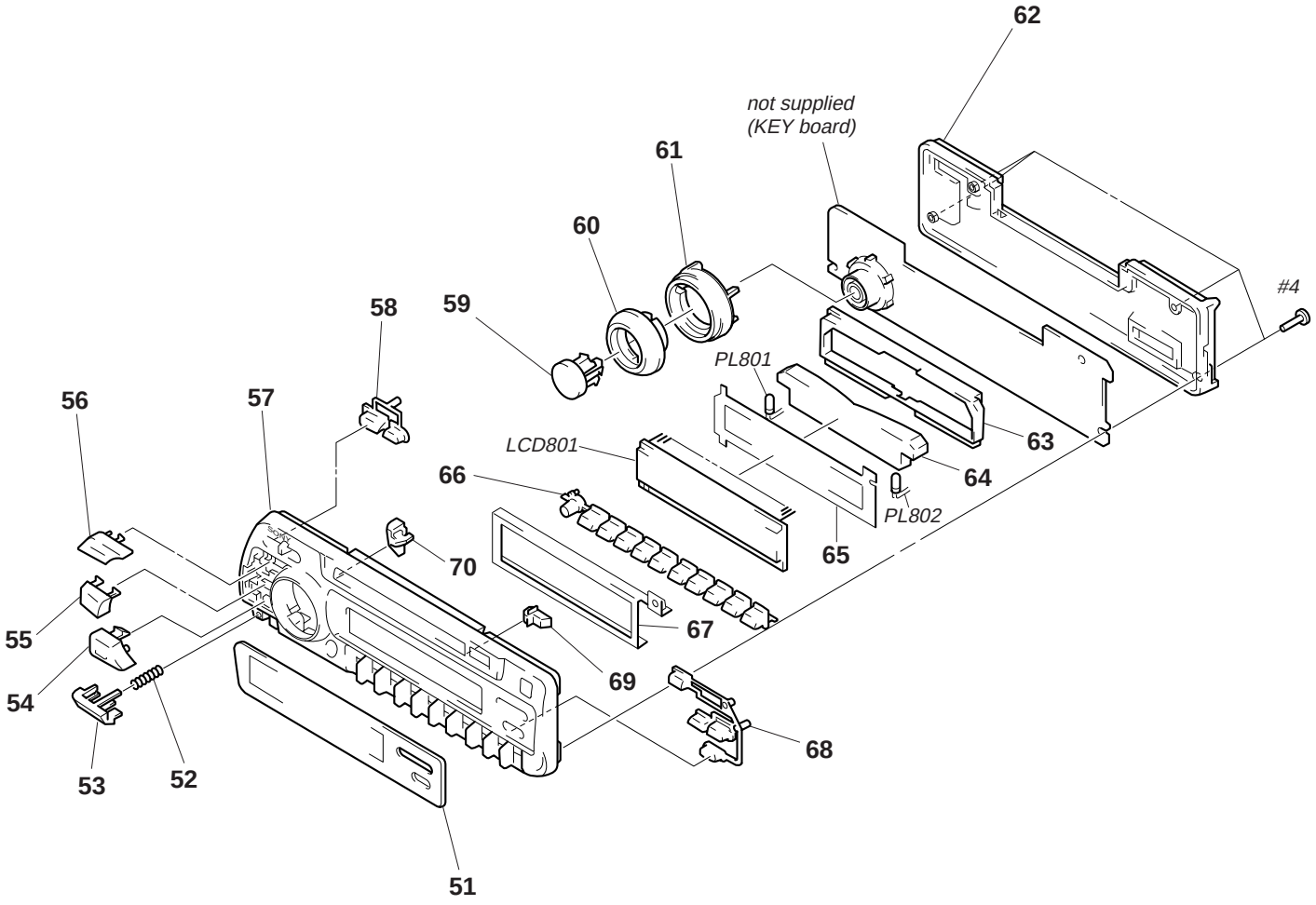
Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le neméro spécifié.

(1) GENERAL SECTION



Ref. No.	Part No.	Description	Remark
1	3-919-344-51	DOOR (MD) (C670)	
1	3-919-344-61	DOOR (MD) (C670RDS)	
2	3-919-343-01	SPRING (DOOR), TORSION	
3	3-011-082-01	PANEL (SUB)	
4	X-3367-636-1	LOCK ASSY	
* 5	X-3373-358-1	CHASSIS ASSY	
* 6	A-3309-843-A	MAIN BOARD, COMPLETE (C670: E)	
* 6	A-3309-846-A	MAIN BOARD, COMPLETE (C670: US, Canadian)	
* 6	A-3309-853-A	MAIN BOARD, COMPLETE (C670RDS)	
* 7	3-011-090-01	BRACKET (AMP)	
* 8	3-011-078-01	BRACKET (POWER IC)	
9	3-011-077-11	HEAT SINK	
10	3-376-464-11	SCREW (+PTT 2.6X6), GROUND POINT	
11	3-932-860-01	SCREW (2.6X4) (C TIGHT), +PTT	
* 12	X-3373-362-1	COVER ASSY	
13	1-776-207-11	CORD (WITH CONNECTOR) (POWER) (C670)	
13	1-776-527-41	CORD (WITH CONNECTOR) (POWER) (C670RDS)	
F1	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A)	

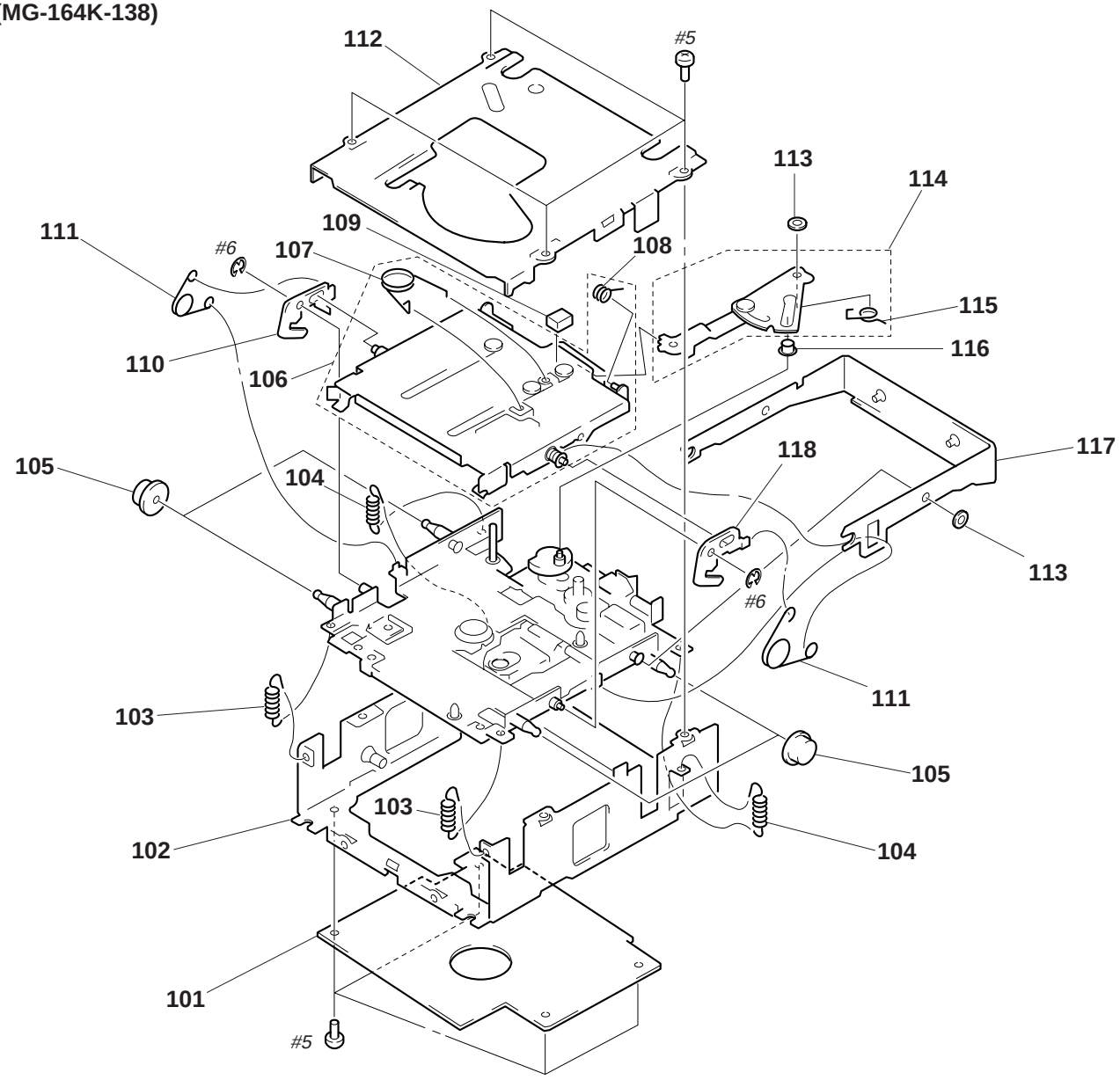
(2) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	X-3373-544-1	WINDOW ASSY (C670)	
51	X-3373-545-1	WINDOW ASSY (C670RDS)	
52	3-008-667-01	SPRING	
53	3-010-431-01	BUTTON (RELEASE) (RELEASE)	
54	3-010-434-01	BUTTON (–) (⏮. ◀◀. –)	
55	3-010-433-01	BUTTON (MODE) (MODE)	
56	3-010-432-01	BUTTON (+) (+. ⏭. ▶▶)	
57	X-3373-360-1	PANEL ASSY, FRONT (C670)	
57	X-3373-361-1	PANEL ASSY, FRONT (C670RDS)	
58	3-010-430-01	BUTTON (SOUND) (SOUND. OFF)	
59	X-3373-271-1	BUTTON (SOURCE) ASSY	
60	3-010-713-01	KNOB	
61	3-010-714-01	PLATE (RING), LIGHT GUIDE	

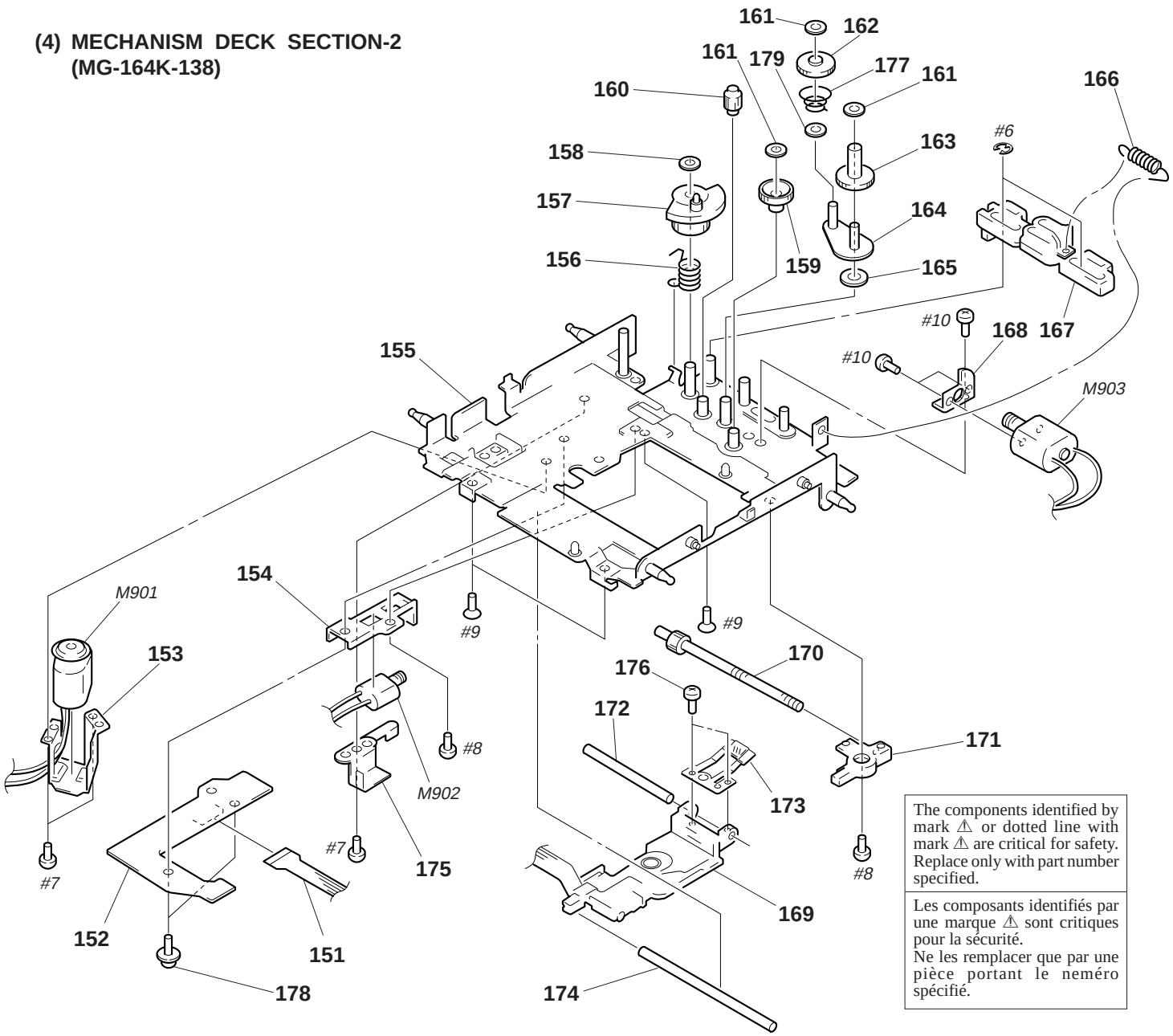
Ref. No.	Part No.	Description	Remark
62	3-011-081-01	PANEL (REAR)	
* 63	3-010-427-01	HOLDER (LCD)	
* 64	3-010-426-01	PLATE (LCD), LIGHT GUIDE	
* 65	3-011-093-01	SHEET (DIFFUSION)	
66	3-932-892-01	BUTTON (10 KEY) (●. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10)	
67	3-012-444-01	SHEET (ELECTROSTATIC 9)	
68	3-011-086-01	BUTTON (EJECT) (⏏)	
69	3-011-085-01	PLATE (R), LIGHT GUIDE	
70	3-011-084-01	PLATE (L), LIGHT GUIDE	
LCD801	1-801-660-11	DISPLAY PANEL, LIQUID CRYSTAL	
PL801	1-517-630-21	LAMP, PILOT	
PL802	1-517-630-21	LAMP, PILOT	

(3) MECHANISM DECK SECTION-1 (MG-164K-138)



Ref. No.	Part No.	Description	Remark
* 101	A-3309-894-A	SERVO BOARD, COMPLETE	
* 102	X-3369-440-1	CHASSIS ASSY, MD	
103	3-919-296-01	SPRING (FL), TENSION	
104	3-921-111-01	SPRING (FL2), TENSION	
105	3-919-273-01	DAMPER, OIL	
* 106	X-3369-444-1	HOLDER ASSY	
107	3-919-319-01	SPRING (HOLDER)	
108	3-919-320-01	SPRING (SUB HOLDER)	
* 109	3-919-436-01	CUSHION (EJ)	
* 110	3-919-280-01	LEVER (LOCK R)	
111	3-919-281-01	SPRING (CHKG)	
* 112	X-3369-441-1	COVER ASSY, MD	
113	3-342-940-01	WASHER (M)	
* 114	X-3369-445-1	LEVER (LE) ASSY	
115	3-919-274-01	SPRING (LE)	
116	3-925-034-01	ROLLER (GLE)	
* 117	X-3369-443-1	ARM ASSY, CHUCKING	
* 118	3-919-279-01	LEVER (LOCK L)	

(4) MECHANISM DECK SECTION-2 (MG-164K-138)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le neméro spécifié.

Ref. No.	Part No.	Description	Remark
151	1-654-693-11	SENSOR FLEXIBLE BOARD	
* 152	1-664-853-11	SENSOR BOARD	
* 153	3-919-297-01	RETAINER (SP)	
* 154	3-919-284-01	BASE (SL)	
* 155	X-3369-442-1	CHASSIS (OP) ASSY	
156	3-919-339-01	SPRING (GLE)	
157	3-919-317-01	GEAR (LE)	
158	4-926-562-01	WASHER, STOPPER	
159	3-919-313-01	WHEEL, WORM	
160	3-919-316-01	GEAR (R)	
161	3-342-940-01	WASHER (M)	
162	3-919-315-01	GEAR (S)	
163	3-919-314-01	GEAR (F)	
164	X-3369-446-1	LEVER (S) ASSY	
165	3-364-387-11	SPRING (F)	
166	3-919-282-01	SPRING (RACK), TENSION	
167	X-3369-447-1	RACK ASSY	
* 168	3-919-312-01	BRACKET (MOTOR)	
⚠169	8-583-037-01	OPTICAL PICK-UP (MD) KMS-241A/J2N	
170	X-3373-213-1	SCREW ASSY, FEED	
* 171	3-919-294-01	BEARING (SL)	
* 172	3-919-293-01	SHAFT (SL)	
173	3-010-091-01	SPRING (SL FEED)	
* 174	3-920-537-01	SHAFT (SL2)	
* 175	3-919-283-01	BRACKET (SL)	
176	3-703-816-32	SCREW (M1.4X1.6), SPECIAL HEAD	
177	3-924-721-01	SPRING (B-T)	
178	2-626-617-01	SCREW (2X8)	
179	3-701-437-01	WASHER	
M901	A-3291-516-A	MOTOR ASSY, SP (SPINDLE)	
M902	A-3291-190-A	MOTOR ASSY, SL (SLED)	
M903	A-3291-191-A	MOTOR ASSY, LO (LOADING)	

SECTION 7
ELECTRICAL PARTS LIST

KEY

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH
- Abbreviation
  CND : Canadian
  G : German

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le neméro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark
		KEY BOARD	
		**********	
*	3-010-426-01	PLATE (LCD), LIGHT GUIDE	
*	3-010-427-01	HOLDER (LCD)	
*	3-011-093-01	SHEET (DIFFUSION)	
		< CAPACITOR >	
C802	1-165-176-11	CERAMIC CHIP 0.047uF 10% 16V	
C803	1-115-467-11	CERAMIC CHIP 0.22uF 10% 10V	
C804	1-115-467-11	CERAMIC CHIP 0.22uF 10% 10V	
C805	1-115-467-11	CERAMIC CHIP 0.22uF 10% 10V	
C806	1-165-176-11	CERAMIC CHIP 0.047uF 10% 16V	
		< CONNECTOR >	
CNP801	1-764-423-11	PIN, CONNECTOR 12P	
		< DIODE >	
D802	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D803	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D804	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D805	8-719-988-62	DIODE 1SS355	
D806	8-719-977-00	DIODE DTZ5.1C	
D807	8-719-977-00	DIODE DTZ5.1C	
D808	8-719-978-69	DIODE DTZ-TT11-16B	
D809	8-719-109-93	DIODE RD6.2ESB2	
D813	8-719-987-45	DIODE CL-155Y/PG-CD	
D814	8-719-987-45	DIODE CL-155Y/PG-CD	
D815	8-719-987-45	DIODE CL-155Y/PG-CD	
D816	8-719-987-45	DIODE CL-155Y/PG-CD	
D817	8-719-987-45	DIODE CL-155Y/PG-CD	
D818	8-719-987-45	DIODE CL-155Y/PG-CD	
D819	8-719-977-00	DIODE DTZ5.1C	
D820	8-719-033-13	DIODE CL-170Y-CD-T	
D821	8-719-033-13	DIODE CL-170Y-CD-T	
D822	8-719-033-14	DIODE CL-170PG-CD-T	
D823	8-719-033-14	DIODE CL-170PG-CD-T	
		< ROTARY ENCODER >	
EN801	1-475-014-11	ENCODER, ROTARY	
		< IC >	
IC801	8-759-397-71	IC uPD16432BGC-012-9EU	
		< LIQUID CRYSTAL DISPLAY >	
LCD801	1-801-660-11	DISPLAY PANEL, LIQUID CRYSTAL	
		< SWITCH >	
LSW801	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (OFF)	
LSW802	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (SOURCE)	
LSW803	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (SOUND)	
LSW804	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (▶▶| ▶▶ +)	
LSW805	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (MODE)	
LSW806	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (|◀◀ ◀◀ –)	
LSW807	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (SHIFT)	
LSW808	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (1)	
LSW809	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (2)	
LSW810	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (3)	
LSW811	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (4)	
LSW812	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (⏏)	
LSW813	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (DSPL)	
LSW814	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (LIST)	(C670)
LSW814	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (PTY/LIST)	(C670RDS)
LSW815	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (SCRL)	(C670)
LSW815	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (AF/TA)	(C670RDS)
LSW816	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (10)	
LSW817	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (9)	
LSW818	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (8)	
LSW819	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (7)	
LSW820	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (6)	
LSW821	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (5)	
		< PILOT LAMP >	
PL801	1-517-630-21	LAMP, PILOT	
PL802	1-517-630-21	LAMP, PILOT	

KEY **MAIN**

Ref. No.	Part No.	Description				Remark
		< TRANSISTOR >				
Q803	8-729-904-78	TRANSISTOR	DTD113ZK			
Q804	8-729-904-78	TRANSISTOR	DTD113ZK			
Q805	8-729-106-60	TRANSISTOR	2SB1115A			
Q806	8-729-026-53	TRANSISTOR	2SA1576A-T106-QR			
Q807	8-729-905-38	TRANSISTOR	2SC4081T106R			
		< RESISTOR >				
R801	1-219-286-11	METAL GLAZE	680	2%	1/16W	
R802	1-219-286-11	METAL GLAZE	680	2%	1/16W	
R803	1-219-286-11	METAL GLAZE	680	2%	1/16W	
R804	1-218-847-11	METAL GLAZE	1K	2%	1/16W	
R805	1-218-851-11	METAL GLAZE	1.5K	2%	1/16W	
R806	1-218-851-11	METAL GLAZE	1.5K	2%	1/16W	
R807	1-218-855-11	METAL GLAZE	2.2K	2%	1/16W	
R808	1-218-859-11	METAL GLAZE	3.3K	2%	1/16W	
R809	1-218-863-11	METAL GLAZE	4.7K	2%	1/16W	
R810	1-218-867-11	METAL GLAZE	6.8K	2%	1/16W	
R812	1-219-286-11	METAL GLAZE	680	2%	1/16W	
R813	1-219-286-11	METAL GLAZE	680	2%	1/16W	
R814	1-219-286-11	METAL GLAZE	680	2%	1/16W	
R815	1-218-847-11	METAL GLAZE	1K	2%	1/16W	
R816	1-218-851-11	METAL GLAZE	1.5K	2%	1/16W	
R817	1-218-851-11	METAL GLAZE	1.5K	2%	1/16W	
R818	1-218-855-11	METAL GLAZE	2.2K	2%	1/16W	
R819	1-218-859-11	METAL GLAZE	3.3K	2%	1/16W	
R820	1-218-863-11	METAL GLAZE	4.7K	2%	1/16W	
R823	1-216-809-11	METAL CHIP	100	5%	1/16W	
R824	1-216-809-11	METAL CHIP	100	5%	1/16W	
R825	1-216-809-11	METAL CHIP	100	5%	1/16W	
R826	1-216-809-11	METAL CHIP	100	5%	1/16W	
R827	1-216-033-00	METAL CHIP	220	5%	1/10W	
R828	1-216-033-00	METAL CHIP	220	5%	1/10W	
R829	1-216-809-11	METAL CHIP	100	5%	1/16W	
R830	1-216-809-11	METAL CHIP	100	5%	1/16W	
R831	1-216-809-11	METAL CHIP	100	5%	1/16W	
R832	1-216-809-11	METAL CHIP	100	5%	1/16W	
R833	1-216-809-11	METAL CHIP	100	5%	1/16W	
R834	1-216-809-11	METAL CHIP	100	5%	1/16W	
R835	1-216-033-00	METAL CHIP	220	5%	1/10W	
R836	1-216-033-00	METAL CHIP	220	5%	1/10W	
R837	1-218-847-11	METAL GLAZE	1K	2%	1/16W	
R838	1-216-033-00	METAL CHIP	220	5%	1/10W	
R839	1-216-033-00	METAL CHIP	220	5%	1/10W	
R840	1-216-817-11	METAL CHIP	470	5%	1/16W	
R841	1-216-809-11	METAL CHIP	100	5%	1/16W	
R845	1-218-895-11	METAL GLAZE	100K	2%	1/16W	
R846	1-218-847-11	METAL GLAZE	1K	2%	1/16W	
R847	1-218-847-11	METAL GLAZE	1K	2%	1/16W	
R849	1-218-863-11	METAL GLAZE	4.7K	2%	1/16W	
R850	1-218-863-11	METAL GLAZE	4.7K	2%	1/16W	
R861	1-216-817-11	METAL CHIP	470	5%	1/16W	
R862	1-218-851-11	METAL GLAZE	1.5K	2%	1/16W	
R863	1-218-855-11	METAL GLAZE	2.2K	2%	1/16W	
		< COMPOSITION CIRCUIT BLOCK >				
RB801	1-233-414-11	RES, CHIP NETWORK 4.7K (3216)				
RB802	1-233-810-21	RES, NETWORK 100K (3216)				
RB803	1-233-414-11	RES, CHIP NETWORK 4.7K (3216)				
**********						
*	A-3309-843-A	MAIN BOARD, COMPLETE (C670: E)				
*	A-3309-846-A	MAIN BOARD, COMPLETE (C670: US, CND)				
*	A-3309-853-A	MAIN BOARD, COMPLETE (C670RDS)				
		**********				
*	3-011-077-11	HEAT SINK				
*	3-011-078-01	BRACKET (POWER IC)				
*	3-011-090-01	BRACKET (AMP)				
	7-685-793-09	SCREW +PTT 2.6X8 (S)				
		< BUZZER >				
BZ701	1-504-920-11	BUZZER				
		< CAPACITOR >				
C002	1-163-053-00	CERAMIC CHIP	0.0033uF		50V	
C1	1-163-235-11	CERAMIC CHIP	22PF	5%	50V	
C3	1-126-933-11	ELECT	100uF	20%	16V	
C4	1-164-232-11	CERAMIC CHIP	0.01uF	10%	100V	
C5	1-126-933-11	ELECT	100uF	20%	16V	
C6	1-164-232-11	CERAMIC CHIP	0.01uF	10%	100V	
C7	1-126-933-11	ELECT	100uF	20%	16V	
C8	1-164-232-11	CERAMIC CHIP	0.01uF	10%	100V	
C10	1-164-232-11	CERAMIC CHIP	0.01uF	10%	100V	
C11	1-164-232-11	CERAMIC CHIP	0.01uF	10%	100V	
C32	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C33	1-126-177-11	ELECT	100uF	20%	10V	
C35	1-126-514-11	ELECT	22uF	20%	16V	
C36	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	
C37	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C38	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C39	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C40	1-163-234-11	CERAMIC CHIP	20PF	5%	50V	
C41	1-163-243-11	CERAMIC CHIP	47PF	5%	50V	
C42	1-164-232-11	CERAMIC CHIP	0.01uF	10%	100V	
C43	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C44	1-164-232-11	CERAMIC CHIP	0.01uF	10%	100V	
C45	1-164-232-11	CERAMIC CHIP	0.01uF	10%	100V	
C51	1-164-232-11	CERAMIC CHIP	0.01uF	10%	100V	
C52	1-126-177-11	ELECT	100uF	20%	10V	
C54	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V	(C670)
C54	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V	(C670RDS)
C55	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V	(C670)
C55	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	(C670RDS)

Ref. No.	Part No.	Description			Remark
C56	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V (C670RDS)
C57	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V (C670RDS)
C58	1-164-232-11	CERAMIC CHIP	0.01uF	10%	100V (C670RDS)
C59	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V (C670RDS)
C61	1-163-064-00	CERAMIC CHIP	0.027uF		50V (C670: US, CND)
C61	1-163-062-00	CERAMIC CHIP	0.018uF	10%	50V (C670: E/C670RDS)
C62	1-164-346-11	CERAMIC CHIP	1uF		16V (C670: E)
C62	1-109-982-11	CERAMIC CHIP	1uF	10%	10V (C670: US, CND/C670RDS)
C71	1-163-064-00	CERAMIC CHIP	0.027uF		50V (C670: US, CND)
C71	1-163-062-00	CERAMIC CHIP	0.018uF	10%	50V (C670: E/C670RDS)
C72	1-164-346-11	CERAMIC CHIP	1uF		16V (C670: E)
C72	1-109-982-11	CERAMIC CHIP	1uF	10%	10V (C670: US, CND/C670RDS)
C81	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C82	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V (C670: US, CND)
C82	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V (C670: E/C670RDS)
C83	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C101	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C102	1-115-866-11	ELECT	4.7uF	20%	35V
C103	1-115-866-11	ELECT	4.7uF	20%	35V
C104	1-126-791-11	ELECT	10uF	20%	16V
C105	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C106	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C107	1-126-791-11	ELECT	10uF	20%	16V
C108	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C109	1-126-791-11	ELECT	10uF	20%	16V
C110	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C112	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C113	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C131	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C151	1-126-059-11	ELECT	10uF	20%	16V
C152	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C161	1-126-059-11	ELECT	10uF	20%	16V
C162	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C171	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C181	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C191	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C201	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C202	1-115-866-11	ELECT	4.7uF	20%	35V
C203	1-115-866-11	ELECT	4.7uF	20%	35V
C204	1-126-791-11	ELECT	10uF	20%	16V
C205	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C206	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C207	1-126-791-11	ELECT	10uF	20%	16V
C208	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C209	1-126-791-11	ELECT	10uF	20%	16V
C210	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C212	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C213	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C231	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C251	1-126-059-11	ELECT	10uF	20%	16V
C252	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C261	1-126-059-11	ELECT	10uF	20%	16V
C262	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C271	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C281	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C291	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C331	1-163-205-00	CERAMIC CHIP	0.001uF	5%	50V
C332	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C333	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C334	1-126-933-11	ELECT	100uF	20%	10V
C335	1-126-177-11	ELECT	100uF	20%	10V
C351	1-164-505-11	CERAMIC CHIP	2.2uF	10%	16V
C352	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C353	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C354	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V (C670RDS)
C381	1-164-232-11	CERAMIC CHIP	0.01uF	10%	100V
C383	1-126-786-11	ELECT	47uF	20%	16V
C384	1-126-791-11	ELECT	10uF	20%	16V
C385	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C386	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C401	1-163-237-11	CERAMIC CHIP	27PF	5%	50V (C670RDS)
C402	1-163-237-11	CERAMIC CHIP	27PF	5%	50V (C670RDS)
C403	1-164-232-11	CERAMIC CHIP	0.01uF	10%	100V (C670RDS)
C404	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V (C670RDS)
C405	1-126-791-11	ELECT	10uF	20%	16V (C670RDS)
C406	1-163-127-00	CERAMIC CHIP	270PF	5%	50V (C670RDS)
C407	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V (C670RDS)
C408	1-126-791-11	ELECT	10uF	20%	16V (C670RDS)
C410	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V (C670RDS)
C501	1-115-866-11	ELECT	4.7uF	20%	35V
C502	1-137-364-11	FILM	0.001uF	5%	50V
C531	1-115-866-11	ELECT	4.7uF	20%	35V
C551	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C552	1-163-133-00	CERAMIC CHIP	470PF	5%	50V

MAIN

Ref. No.	Part No.	Description				Remark
C601	1-126-791-11	ELECT	10uF	20%	16V	
C602	1-126-791-11	ELECT	10uF	20%	16V	
C603	1-126-791-11	ELECT	10uF	20%	16V	
C604	1-126-791-11	ELECT	10uF	20%	16V	
C605	1-126-791-11	ELECT	10uF	20%	16V	
C606	1-126-791-11	ELECT	10uF	20%	16V	
C607	1-126-923-11	ELECT	220uF	20%	10V	
C608	1-125-701-11	CAPACITOR	0.047F	0	5.5V	
C631	1-104-329-11	CERAMIC CHIP	0.1uF	10%	50V	
C651	1-124-635-00	ELECT	220uF	20%	6.3V	
C652	1-126-933-11	ELECT	100uF	20%	16V	
C653	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C654	1-124-473-11	ELECT	1000uF	20%	10V	
C671	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C681	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C682	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C683	1-126-016-11	ELECT	4700uF	20%	16V	
C684	1-164-232-11	CERAMIC CHIP	0.01uF	10%	100V	
C685	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C701	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C702	1-163-231-11	CERAMIC CHIP	15PF	5%	50V	
C703	1-163-229-11	CERAMIC CHIP	12PF	5%	50V	
C704	1-107-682-11	CERAMIC CHIP	1uF	10%	16V	
C705	1-164-232-11	CERAMIC CHIP	0.01uF	10%	100V	
C732	1-109-982-11	CERAMIC CHIP	1uF	10%	10V	
C733	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C752	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	(C670RDS)
		< CONNECTOR >				
CN551	1-764-422-11	PLUG, CONNECTOR 12P				
CN651	1-764-617-12	PIN, CONNECTOR (PC BOARD) 30P				
		< JACK >				
CNJ351	1-774-700-11	JACK, PIN 6P (BUS AUDIO IN, LINE OUT FRONT/REAR)				
CNJ501	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL IN)				
		< CONNECTOR >				
CNP681	1-774-701-11	PIN, CONNECTOR 16P				
		< COMPOSITION CIRCUIT BLOCK >				
CP1	1-519-504-11	GAP, DISCHARGE				
		< DIODE >				
D1	8-719-040-04	DIODE MA721WK-(TX)				
D31	8-719-034-42	DIODE MA4056-M(QZ)				
D51	8-719-034-63	DIODE MA4091-H(QZ)				
D351	8-719-988-62	DIODE 1SS355				
D352	8-719-988-62	DIODE 1SS355 (C670RDS)				
D353	8-719-988-62	DIODE 1SS355				
D354	8-719-988-62	DIODE 1SS355				
D355	8-719-988-62	DIODE 1SS355				
D356	8-719-988-62	DIODE 1SS355				
D381	8-719-313-73	DIODE SFPB-52				

Ref. No.	Part No.	Description	Remark
D401	8-719-034-42	DIODE MA4056-M (QZ) (C670RDS)	
D501	8-719-017-62	DIODE MA8068-L-TX	
D502	8-719-017-62	DIODE MA8068-L-TX	
D503	8-719-017-62	DIODE MA8068-L-TX	
D504	8-719-017-62	DIODE MA8068-L-TX	
D505	8-719-034-90	DIODE MA4160-M (QZ)	
D531	8-719-420-14	DIODE MA8082-M	
D551	8-719-914-44	DIODE DAP202K	
D552	8-719-988-62	DIODE 1SS355	
D553	8-719-034-46	DIODE MA4062-M (QZ)	
D554	8-719-034-46	DIODE MA4062-M (QZ)	
D555	8-719-423-32	DIODE MA8120-M	
D556	8-719-017-62	DIODE MA8068-L-TX	
D557	8-719-017-62	DIODE MA8068-L-TX	
D558	8-719-034-46	DIODE MA4062-M (QZ)	
D559	8-719-034-46	DIODE MA4062-M (QZ)	
D560	8-719-034-46	DIODE MA4062-M (QZ)	
D561	8-719-034-46	DIODE MA4062-M (QZ)	
D562	8-719-034-46	DIODE MA4062-M (QZ)	
D601	8-719-050-86	DIODE 1SS133T-91S	
D602	8-719-050-86	DIODE 1SS133T-91S	
D603	8-719-041-79	DIODE MA721WA-TX	
D604	8-719-988-62	DIODE 1SS355	
D631	8-719-034-70	DIODE MA4110-M (QZ)	
D651	8-719-313-73	DIODE SFPB-52	
D671	8-719-423-32	DIODE MA8120-M	
D681	8-719-017-62	DIODE MA8068-L-TX	
D683	8-719-988-62	DIODE 1SS355	
D684	8-719-049-38	DIODE 1N5404TU	
D701	8-719-914-44	DIODE DAP202K	
D751	8-719-988-62	DIODE 1SS355 (C670RDS)	
		< IC >	
IC31	8-759-448-84	IC BU2624F-E2	
IC51	8-759-184-64	IC TC4W66FU (C670RDS)	
IC301	8-752-080-50	IC CXA1946BQ-T6	
IC331	8-759-278-58	IC NJM4558V-TE2	
IC381	8-759-448-48	IC HA13157	
IC401	8-759-163-63	IC TDA7330BD-013TR (C670RDS)	
IC501	8-759-449-89	IC BA8270F-E2	
IC601	8-759-347-50	IC BA3918-V3	
IC651	8-759-337-67	IC NJM2360AM (TE2)	
IC701	8-759-458-35	IC uPD78058GC-461-3B9	
IC731	8-759-344-91	IC RN5VD23AA-TL	
IC732	8-759-363-81	IC XC61AN4002PR	
IC751	8-759-456-16	IC MN1883220Y5D (C670RDS)	
		< JACK >	
J1	1-764-808-14	JACK (ANT) (FM/AM ANTENNA)	
J551	1-566-822-41	JACK (REMOTE IN)	
		< CHIP CONDUCTOR >	
JC1	1-216-296-00	CONDUCTOR, CHIP (3216) (C670RDS)	
JC2	1-216-296-00	CONDUCTOR, CHIP (3216) (C670RDS)	
JC3	1-216-295-00	CONDUCTOR, CHIP (2012)	

Ref. No.	Part No.	Description	Remark
JC4	1-216-296-00	CONDUCTOR, CHIP (3216)	
		< COIL >	
L1	1-414-146-31	INDUCTOR 2.2uH	
L2	1-414-146-31	INDUCTOR 2.2uH	
L31	1-410-509-11	INDUCTOR 10uH	
L401	1-410-509-11	INDUCTOR 10uH (C670RDS)	
L651	1-412-537-31	INDUCTOR 100uH	
L652	1-412-533-21	INDUCTOR 47uH	
L653	1-412-533-21	INDUCTOR 47uH	
L681	1-411-669-12	COIL, CHOKE	
L701	1-410-509-11	INDUCTOR 10uH	
L751	1-410-509-11	INDUCTOR 10uH (C670RDS)	
		< IC LINK >	
PS501	1-532-686-21	LINK, IC	
		< TRANSISTOR >	
Q1	8-729-120-28	TRANSISTOR 2SC1623-L5L6 (C670RDS)	
Q31	8-729-920-85	TRANSISTOR 2SD1664-QR	
Q51	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q52	8-729-021-94	TRANSISTOR 2SK1657-T1B	
Q53	8-729-900-53	TRANSISTOR DTC114EK (C670RDS)	
Q61	8-729-920-21	TRANSISTOR DTC314TKH04 (C670RDS)	
Q71	8-729-920-21	TRANSISTOR DTC314TKH04 (C670RDS)	
Q81	8-729-920-21	TRANSISTOR DTC314TKH04 (C670RDS)	
Q151	8-729-920-21	TRANSISTOR DTC314TKH04	
Q161	8-729-920-21	TRANSISTOR DTC314TKH04	
Q181	8-729-920-21	TRANSISTOR DTC314TKH04	
Q191	8-729-920-21	TRANSISTOR DTC314TKH04	
Q251	8-729-920-21	TRANSISTOR DTC314TKH04	
Q261	8-729-920-21	TRANSISTOR DTC314TKH04	
Q281	8-729-920-21	TRANSISTOR DTC314TKH04	
Q291	8-729-920-21	TRANSISTOR DTC314TKH04	
Q351	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q352	8-729-120-28	TRANSISTOR 2SC1623-L5L6 (C670RDS)	
Q401	8-729-120-28	TRANSISTOR 2SC1623-L5L6 (C670RDS)	
Q501	8-729-900-53	TRANSISTOR DTC114EK	
Q502	8-729-900-53	TRANSISTOR DTC114EK (C670RDS)	
Q503	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q504	8-729-900-53	TRANSISTOR DTC114EK	
Q531	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q551	8-729-924-73	TRANSISTOR FMA9	
Q631	8-729-030-18	TRANSISTOR 2SD2525	
Q632	8-729-030-18	TRANSISTOR 2SD2525	
Q633	8-729-921-25	TRANSISTOR FMC2	
Q634	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q637	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q651	8-729-106-60	TRANSISTOR 2SB1115A	
Q652	8-729-900-53	TRANSISTOR DTC114EK	
Q671	8-729-807-12	TRANSISTOR 2SD1802-S	
Q672	8-729-921-25	TRANSISTOR FMC2	
Q681	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q701	8-729-900-53	TRANSISTOR DTC114EK	
		< RESISTOR >	
R1	1-216-037-00	METAL CHIP 330 5% 1/10W	
R2	1-216-049-11	METAL GLAZE 1K 5% 1/10W	
R3	1-216-041-00	METAL CHIP 470 5% 1/10W	
R4	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R5	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R6	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R7	1-216-105-00	METAL GLAZE 220K 5% 1/10W	
R8	1-216-097-00	METAL GLAZE 100K 5% 1/10W	(C670RDS)
R9	1-216-295-00	CONDUCTOR, CHIP (2012)	(C670)
R10	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R31	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R32	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R34	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R36	1-216-073-00	METAL CHIP 10K 5% 1/10W	(C670)
R37	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R38	1-216-295-00	CONDUCTOR, CHIP (2012)	(C670)
R51	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R52	1-216-198-00	METAL GLAZE 1K 5% 1/8W	
R53	1-216-238-00	METAL GLAZE 47K 5% 1/8W	(C670RDS)
R54	1-216-073-00	METAL CHIP 10K 5% 1/10W	(C670)
R54	1-216-075-00	METAL CHIP 12K 5% 1/10W	(C670RDS)
R55	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	(C670RDS)
R56	1-216-073-00	METAL CHIP 10K 5% 1/10W	(C670RDS)
R57	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	(C670RDS)
R61	1-216-073-00	METAL CHIP 10K 5% 1/10W	(C670: US, CND)
R61	1-216-075-00	METAL CHIP 12K 5% 1/10W	(C670: E/C670RDS: AEP, UK)
R61	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	(C670RDS: G)
R62	1-216-073-00	METAL CHIP 10K 5% 1/10W	(C670: US, CND)
R62	1-216-081-00	METAL CHIP 22K 5% 1/10W	(C670: E/C670RDS)
R71	1-216-073-00	METAL CHIP 10K 5% 1/10W	(C670: US, CND)
R71	1-216-075-00	METAL CHIP 12K 5% 1/10W	(C670: E/C670RDS: AEP, UK)
R71	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	(C670RDS: G)
R72	1-216-073-00	METAL CHIP 10K 5% 1/10W	(C670: US, CND)
R72	1-216-081-00	METAL CHIP 22K 5% 1/10W	(C670: E/C670RDS)
R81	1-216-073-00	METAL CHIP 10K 5% 1/10W	

MAIN

Ref. No.	Part No.	Description			Remark
R82	1-216-065-00	METAL CHIP	4.7K	5%	1/10W (C670: US, CND)
R82	1-216-081-00	METAL CHIP	22K	5%	1/10W (C670: E/C670RDS)
R101	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R102	1-216-073-00	METAL CHIP	10K	5%	1/10W
R103	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R104	1-216-073-00	METAL CHIP	10K	5%	1/10W
R105	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R106	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R131	1-216-073-00	METAL CHIP	10K	5%	1/10W
R132	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R151	1-216-033-00	METAL CHIP	220	5%	1/10W
R152	1-216-081-00	METAL CHIP	22K	5%	1/10W
R161	1-216-033-00	METAL CHIP	220	5%	1/10W
R162	1-216-081-00	METAL CHIP	22K	5%	1/10W
R171	1-216-075-00	METAL CHIP	12K	5%	1/10W
R172	1-216-073-00	METAL CHIP	10K	5%	1/10W
R181	1-216-073-00	METAL CHIP	10K	5%	1/10W
R183	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R191	1-216-073-00	METAL CHIP	10K	5%	1/10W
R193	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R201	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R202	1-216-073-00	METAL CHIP	10K	5%	1/10W
R203	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R204	1-216-073-00	METAL CHIP	10K	5%	1/10W
R205	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R206	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R231	1-216-073-00	METAL CHIP	10K	5%	1/10W
R232	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R251	1-216-033-00	METAL CHIP	220	5%	1/10W
R252	1-216-081-00	METAL CHIP	22K	5%	1/10W
R261	1-216-033-00	METAL CHIP	220	5%	1/10W
R262	1-216-081-00	METAL CHIP	22K	5%	1/10W
R271	1-216-075-00	METAL CHIP	12K	5%	1/10W
R272	1-216-073-00	METAL CHIP	10K	5%	1/10W
R281	1-216-073-00	METAL CHIP	10K	5%	1/10W
R283	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R291	1-216-073-00	METAL CHIP	10K	5%	1/10W
R293	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R331	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R332	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R351	1-216-037-00	METAL CHIP	330	5%	1/10W
R352	1-216-037-00	METAL CHIP	330	5%	1/10W (C670RDS)
R381	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R384	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R401	1-216-129-00	METAL CHIP	2.2M	5%	1/10W (C670RDS)
R402	1-216-057-00	METAL CHIP	2.2K	5%	1/10W (C670RDS)
R403	1-216-057-00	METAL CHIP	2.2K	5%	1/10W (C670RDS)
R501	1-216-073-00	METAL CHIP	10K	5%	1/10W
R502	1-216-025-00	METAL GLAZE	100	5%	1/10W
R503	1-216-025-00	METAL GLAZE	100	5%	1/10W
R504	1-216-150-00	METAL GLAZE	10	5%	1/8W
R505	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R531	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R532	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R534	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R551	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R552	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R553	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R554	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R555	1-216-025-00	METAL GLAZE	100	5%	1/10W
R556	1-216-025-00	METAL GLAZE	100	5%	1/10W
R557	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R558	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R559	1-216-025-00	METAL GLAZE	100	5%	1/10W
R560	1-216-025-00	METAL GLAZE	100	5%	1/10W
R561	1-216-025-00	METAL GLAZE	100	5%	1/10W
R631	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R632	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R633	1-216-037-00	METAL CHIP	330	5%	1/10W
R634	1-216-037-00	METAL CHIP	330	5%	1/10W
R635	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R636	1-216-073-00	METAL CHIP	10K	5%	1/10W
R637	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R638	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R639	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R651	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R652	1-216-663-11	METAL CHIP	3.3K	0.5%	1/10W
R653	1-216-073-00	METAL CHIP	10K	5%	1/10W
R654	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R655	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R656	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R657	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R658	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R659	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R671	1-216-190-00	METAL GLAZE	470	5%	1/8W
R681	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R682	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R683	1-216-073-00	METAL CHIP	10K	5%	1/10W
R684	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R685	1-216-073-00	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R686	1-216-073-00	METAL CHIP	10K	5%	1/10W
R702	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R709	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R710	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R711	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R712	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R713	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R715	1-216-097-00	METAL GLAZE	100K	5%	1/10W (C670: E)
R716	1-216-097-00	METAL GLAZE	100K	5%	1/10W (C670RDS)
R717	1-216-097-00	METAL GLAZE	100K	5%	1/10W (C670)
R717	1-216-085-00	METAL CHIP	33K	5%	1/10W (C670RDS)
R724	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R725	1-216-057-00	METAL CHIP	2.2K	5%	1/10W (C670)
R726	1-216-057-00	METAL CHIP	2.2K	5%	1/10W (C670)
R727	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R729	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R730	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R731	1-216-113-00	METAL CHIP	470K	5%	1/10W
R732	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R734	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R751	1-216-049-11	METAL GLAZE	1K	5%	1/10W (C670RDS)
R753	1-216-049-11	METAL GLAZE	1K	5%	1/10W (C670RDS)
R755	1-216-089-00	METAL GLAZE	47K	5%	1/10W (C670RDS)
R756	1-216-089-00	METAL GLAZE	47K	5%	1/10W (C670RDS)
R757	1-216-089-00	METAL GLAZE	47K	5%	1/10W (C670RDS)
R758	1-216-097-00	METAL GLAZE	100K	5%	1/10W (C670RDS)
R999	1-216-037-00	METAL GLAZE	330		1/10W
		< COMPOSITION CIRCUIT BLOCK >			
RB551	1-233-412-11	RES, CHIP NETWORK 1.0K (3216)			
RB552	1-233-412-11	RES, CHIP NETWORK 1.0K (3216)			
RB701	1-233-413-11	RES, CHIP NETWORK 2.2K (3216)			
RB702	1-233-810-21	RES, NETWORK 100K (3216)			
RB703	1-233-412-11	RES, CHIP NETWORK 1.0K (3216)			
RB704	1-233-412-11	RES, CHIP NETWORK 1.0K (3216)			

Ref. No.	Part No.	Description			Remark
		< VARIABLE RESISTOR >			
RV1	1-223-591-11	RES, ADJ, METAL GLAZE 470K (C670RDS)			
		< SWITCH >			
S551	1-692-431-21	SWITCH, TACTILE (RESET)			
S701	1-572-552-21	SWITCH,SLIDE(FREQUENCY SELECT) (C670: E)			
S702	1-572-552-21	SWITCH, SLIDE (POWER SELECT)			
		< TUNER >			
TU1	A-3282-029-A	TUNER TUX-006/2 (E)			
		< VIBRATOR >			
X31	1-760-838-21	VIBRATOR, CRYSTAL (7.2MHz)			
X401	1-760-556-31	VIBRATOR, CRYSTAL (4.332MHz) (C670RDS)			
X701	1-767-460-21	VIBRATOR, CERAMIC (5MHz)			
X702	1-579-886-21	VIBRATOR, CRYSTAL (32.768kHz)			
X751	1-767-459-21	VIBRATOR, CERAMIC (8MHz) (C670RDS)			
**********					
*	1-664-853-11	SENSOR BOARD			
		**********			
		< CAPACITOR >			
C901	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< CONNECTOR >			
CN901	1-764-439-21	CONNECTOR, FPC 11P			
		< SWITCH >			
S901	1-572-288-11	SWITCH, PUSH (LOADING START/EJECT END)			
S902	1-572-288-11	SWITCH, PUSH (LOADING END)			
S903	1-572-467-61	SWITCH, PUSH (1 KEY) (LIMIT)			
**********					
*	A-3309-894-A	SERVO BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-104-543-11	CERAMIC CHIP	0.0022uF	5%	50V
C102	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C103	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C104	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C105	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V

SERVO

Ref. No.	Part No.	Description				Remark
C106	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V	
C107	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C108	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C109	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V	
C201	1-104-543-11	CERAMIC CHIP	0.0022uF	5%	50V	
C202	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V	
C301	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C302	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C304	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	
C305	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C306	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V	
C307	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C308	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	
C309	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	
C310	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V	
C311	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V	
C314	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C315	1-109-982-11	CERAMIC CHIP	1uF	10%	10V	
C316	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C317	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C318	1-104-852-11	TANTAL. CHIP	22uF	20%	6.3V	
C319	1-104-852-11	TANTAL. CHIP	22uF	20%	6.3V	
C320	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V	
C321	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V	
C322	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C324	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C325	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V	
C326	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	
C327	1-109-982-11	CERAMIC CHIP	1uF	10%	10V	
C328	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C329	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V	
C330	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C331	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C333	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C334	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C335	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C336	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C337	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C338	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C339	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C340	1-162-918-11	CERAMIC CHIP	18PF	5%	50V	
C341	1-162-918-11	CERAMIC CHIP	18PF	5%	50V	
C342	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C343	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C344	1-104-852-11	TANTAL. CHIP	22uF	20%	6.3V	
C345	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C346	1-104-852-11	TANTAL. CHIP	22uF	20%	6.3V	
C347	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C348	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C349	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C350	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C351	1-104-852-11	TANTAL. CHIP	22uF	20%	10V	
C352	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C353	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C356	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	
C357	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	
C358	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	
C359	1-162-923-11	CERAMIC CHIP	47PF	5%	50V	
C402	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C403	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C501	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	
C503	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C504	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C505	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C506	1-104-852-11	TANTAL. CHIP	22uF	20%	10V	
C510	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V	
C511	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C512	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C513	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C514	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V	
C515	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C516	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
		< CONNECTOR >				
CN101	1-779-389-11	CONNECTOR, BOARD TO BOARD				
CN102	1-573-929-11	CONNECTOR, FFC/FPC (ZIF) 20P				
CN103	1-764-439-21	CONNECTOR, FPC 11P				
		< DIODE >				
D401	8-719-056-98	DIODE UDZ-TE17-30B				
D501	8-719-988-62	DIODE 1SS355				
		< FERRITE BEAD >				
FB301	1-414-235-11	INDUCTOR, FERRITE BEAD				
FB302	1-414-385-11	INDUCTOR, FERRITE BEAD				
		< IC >				
IC101	8-759-456-13	IC PCM1718E-T1				
IC301	8-752-378-54	IC CXD2650R				
IC302	8-752-074-77	IC CXA2523R				
IC303	8-759-430-25	IC BH6511FS-E2				
IC304	8-759-096-87	IC TC7WU04FU(TE12R)				
IC305	8-759-040-83	IC BA6287F				
IC306	8-759-058-62	IC TC7S08FU(TE85R)				
IC501	8-752-884-24	IC CXP84340-049Q				
IC401	8-759-909-71	IC BA4558F				
IC502	8-759-238-47	IC TC74HCT7007AF(EL)				
IC503	8-759-238-47	IC TC74HCT7007AF(EL)				

Ref. No.	Part No.	Description				Remark
		< COIL >				
L101	1-412-058-11	INDUCTOR CHIP	10uH			
L102	1-412-058-11	INDUCTOR CHIP	10uH			
L301	1-412-058-11	INDUCTOR CHIP	10uH			
L302	1-412-058-11	INDUCTOR CHIP	10uH			
L303	1-412-039-51	INDUCTOR CHIP	100uH			
L304	1-412-039-51	INDUCTOR CHIP	100uH			
L305	1-412-039-51	INDUCTOR CHIP	100uH			
L306	1-412-039-51	INDUCTOR CHIP	100uH			
L501	1-412-058-11	INDUCTOR CHIP	10uH			
		< TRANSISTOR >				
Q301	8-729-230-49	TRANSISTOR	2SC2712-YG			
Q302	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R			
Q401	8-729-920-85	TRANSISTOR	2SD1664-QR			
Q402	8-729-106-60	TRANSISTOR	2SB1115A-YQ			
Q403	8-729-421-22	TRANSISTOR	UN2211			
		< RESISTOR >				
R101	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R102	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R103	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R104	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R201	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R202	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R301	1-216-809-11	METAL CHIP	100	5%	1/16W	
R302	1-216-809-11	METAL CHIP	100	5%	1/16W	
R303	1-216-809-11	METAL CHIP	100	5%	1/16W	
R304	1-216-809-11	METAL CHIP	100	5%	1/16W	
R305	1-216-809-11	METAL CHIP	100	5%	1/16W	
R306	1-216-809-11	METAL CHIP	100	5%	1/16W	
R307	1-216-809-11	METAL CHIP	100	5%	1/16W	
R308	1-216-809-11	METAL CHIP	100	5%	1/16W	
R311	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R312	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R316	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R317	1-216-809-11	METAL CHIP	100	5%	1/16W	
R318	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R319	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R320	1-216-855-11	METAL CHIP	680K	5%	1/16W	
R324	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	
R325	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R327	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R328	1-216-811-11	METAL CHIP	150	5%	1/16W	
R329	1-216-819-11	METAL CHIP	680	5%	1/16W	
R330	1-216-853-11	METAL CHIP	470K	5%	1/16W	
R331	1-216-809-11	METAL CHIP	100	5%	1/16W	
R332	1-216-809-11	METAL CHIP	100	5%	1/16W	
R333	1-216-819-11	METAL CHIP	680	5%	1/16W	

Ref. No.	Part No.	Description				Remark
R334	1-216-809-11	METAL CHIP	100	5%	1/16W	
R335	1-216-815-11	METAL CHIP	330	5%	1/16W	
R336	1-216-853-11	METAL CHIP	470K	5%	1/16W	
R337	1-216-853-11	METAL CHIP	470K	5%	1/16W	
R338	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R339	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	
R340	1-216-843-11	METAL CHIP	68K	5%	1/16W	
R341	1-216-837-11	METAL CHIP	22K	5%	1/16W	
R342	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R343	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	
R344	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R345	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	
R346	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R347	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R348	1-218-708-11	METAL CHIP	4.7K	0.50%	1/16W	
R349	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R350	1-216-142-00	METAL GLAZE	4.7	5%	1/8W	
R351	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W	
R352	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W	
R353	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W	
R354	1-216-857-11	METAL CHIP	1M	5%	1/16W	
R355	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R356	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R357	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R401	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R402	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R403	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R404	1-216-809-11	METAL CHIP	100	5%	1/16W	
R405	1-218-692-11	METAL CHIP	1K	0.50%	1/16W	
R406	1-218-714-11	METAL CHIP	8.2K	0.50%	1/16W	
R501	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R502	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R503	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R504	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R505	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R506	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R507	1-218-708-11	METAL CHIP	4.7K	0.50%	1/16W	
R508	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R511	1-216-847-11	METAL CHIP	150K	5%	1/16W	
R512	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R516	1-216-809-11	METAL CHIP	100	5%	1/16W	
R517	1-216-809-11	METAL CHIP	100	5%	1/16W	
R518	1-216-809-11	METAL CHIP	100	5%	1/16W	
R519	1-216-809-11	METAL CHIP	100	5%	1/16W	
R520	1-216-809-11	METAL CHIP	100	5%	1/16W	
R521	1-216-809-11	METAL CHIP	100	5%	1/16W	
R522	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R523	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R524	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R525	1-216-845-11	METAL CHIP	100K	5%	1/16W	

SERVO

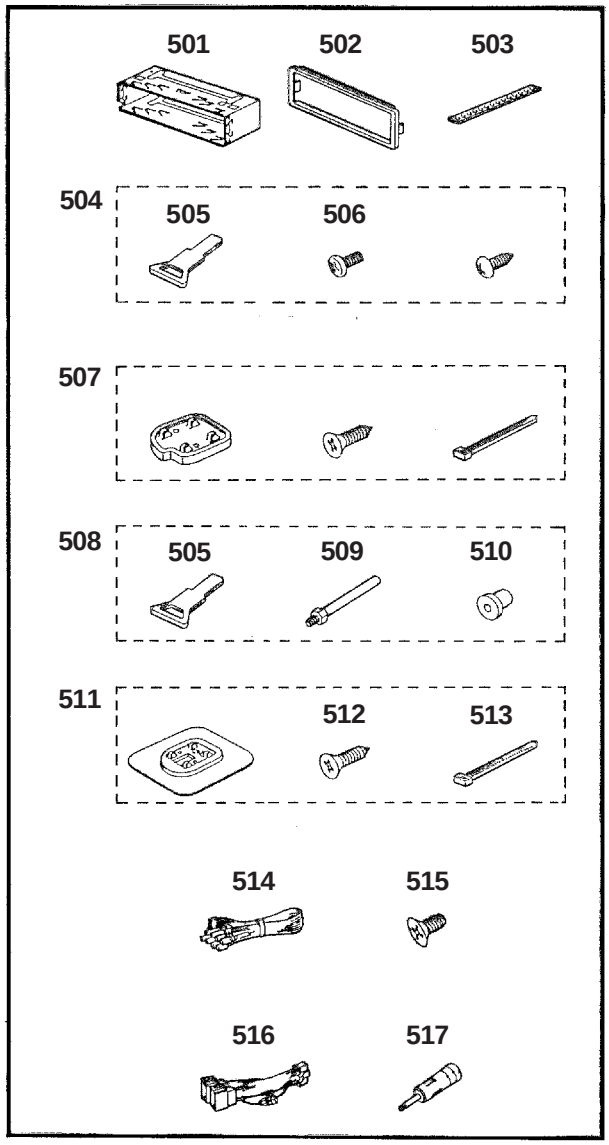
Ref. No.	Part No.	Description				Remark
R526	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R527	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R528	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R529	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R530	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R531	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R532	1-216-864-11	CONDUCTOR CHIP	0	5%	1/16W	
R533	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R534	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R535	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R536	1-216-864-11	CONDUCTOR CHIP	0	5%	1/16W	
R537	1-216-809-11	METAL CHIP	100	5%	1/16W	
R538	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R539	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R540	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R542	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R544	1-216-845-11	METAL CHIP	100K	5%	1/16W	
		< COMPOSITION CIRCUIT BLOCK >				
RB301	1-233-576-11	RES, CHIP NETWORK 100				
RB302	1-233-576-11	RES, CHIP NETWORK 100				
RB503	1-233-412-11	RES, CHIP NETWORK 1.0K (3216)				
		< THERMISTOR >				
TH501	1-810-421-11	THERMISTOR NTH5G36B103K01TE				
		< VIBRATOR >				
X301	1-767-429-11	VIBRATOR, CRYSTAL (22.5792MHz)				
X501	1-760-365-11	VIBRATOR, CERAMIC (10MHz)				
**********						
		MISCELLANEOUS				
		**********				
13	1-776-207-11	CORD (WITH CONNECTOR) (POWER) (C670)				
13	1-776-527-41	CORD (WITH CONNECTOR) (POWER)				(C670RDS)
151	1-654-693-11	SENSOR FLEXIBLE BOARD				
⚠169	8-583-037-01	OPTICAL PICK-UP (MD) KMS-241A/J2N				
F1	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A)				
LCD801	1-801-660-11	DISPLAY PANEL, LIQUID CRYSTAL				
M901	A-3291-516-A	MOTOR ASSY, SP (SPINDLE)				
M902	A-3291-190-A	MOTOR ASSY, SL (SLED)				
M903	A-3291-191-A	MOTOR ASSY, LO (LOADING)				
PL801	1-517-630-21	LAMP, PILOT				
PL802	1-517-630-21	LAMP, PILOT				
**********						

Ref. No.	Part No.	Description	Remark
		**********	
		HARDWARE LIST	
		**********	
#1	7-621-772-10	SCREW +B 2X4	
#2	7-685-792-09	SCREW +PTT 2.6X6 (S)	
#3	7-685-793-09	SCREW +PTT 2.6X8 (S)	
#4	7-685-106-19	SCREW +P 2X10 TYPE2 NON-SLIT	
#5	7-685-851-04	SCREW +BVTT 2X4 (S)	
#6	7-624-102-04	STOP RING 1.5, TYPE-E	
#7	7-627-852-37	PRECISION SCREW +P1.7X1.8 TYPE 3	
#8	7-621-772-00	SCREW +B 2X3	
#9	7-621-555-10	SCREW +K 2X3	
#10	7-627-554-07	SCREW, PRECISION +P 2X2.2	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-473-067-31	REMOTE COMMANDER (RM-X2S)	
*	3-012-070-01	LABEL (SOUND) (2)	
	3-859-436-11	MANUAL, INSTRUCTION (ENGLISH, SPANISH, CHINESE) (C670: E)	
	3-859-436-21	MANUAL, INSTRUCTION (ENGLISH, SPANISH, SWEDISH, PORTUGUESE) (C670RDS: AEP, UK)	
	3-859-436-31	MANUAL, INSTRUCTION (FRENCH, GERMAN, DUTCH, ITALIAN) (C670RDS: AEP)	
	3-859-436-41	MANUAL, INSTRUCTION (GERMAN) (C670RDS: G)	
	3-859-436-51	MANUAL, INSTRUCTION (ENGLISH) (C670: US, CND)	
	3-859-436-61	MANUAL, INSTRUCTION (FRENCH) (C670: CND)	
	3-859-437-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH, CHINESE) (C670: E)	
	3-859-437-21	MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH, SWEDISH, PORTUGUESE) (C670RDS: AEP, UK)	
	3-859-437-31	MANUAL, INSTRUCTION, INSTALL (FRENCH, GERMAN, DUTCH, ITALIAN) (C670RDS: AEP, G)	
	3-859-437-41	MANUAL, INSTRUCTION, INSTALL (ENGLISH, FRENCH) (C670: US, CND)	
	3-934-325-01	SCREW, +K (5X8) TAPPING (C670: US, CND)	
	X-3373-617-1	CASE ASSY (for FRONT PANEL)	
**********			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.

Ref. No.	Part No.	Description	Remark
		PARTS FOR INSTALLATION AND CONNECTIONS ****	
501	3-916-161-42	FRAME, FITTING	
502	3-932-910-01	COLLAR (CDX)	
503	3-914-406-01	SUPPORT (ND), FITTING (C670: US, CND)	
504	X-3370-076-1	SCREW ASSY (U. KEY), FITTING	
505	3-388-078-01	KEY	
506	7-682-560-04	SCREW +P 4X6 (C670: US, CND)	
507	X-3369-817-1	BRACKET ASSY (EXCEPT C670: E)	
508	X-3370-077-1	SCREW ASSY (AE. KEY), FITTING	(C670: E/C670RDS)
509	3-386-828-01	SCREW, FITTING (C670: E/C670RDS)	
510	3-349-410-01	BUSHING (C670: E/C670RDS)	
511	X-3373-432-1	BRACKET ASSY (C670: E)	
512	7-685-248-14	SCREW +KTP 3X12 TYPE4 (C670: E)	
* 513	3-671-893-00	CLAMP (LOW TYPE) (C670: E)	
514	1-776-207-11	CORD (WITH CONNECTOR) (POWER) (C670)	
515	3-934-325-01	SCREW, +K (5X8) TAPPING (C670)	
516	1-776-527-41	CORD (WITH CONNECTOR) (POWER)	(C670RDS)
517	1-465-459-21	ADAPTER, ANTENNA (C670RDS)	

Ref. No.	Part No.	Description	Remark



Sony Corporation
Personal & Mobile Communication Company

9-925-530-11

97A0581-1
Printed in Japan © 1997. 1
Published by Quality Assurance Dept.

MDX-C670/C670RDS

SONY

SERVICE MANUAL

US Model
Canadian Model
E Model
MDX-C670
AEP Model
UK Model
MDX-C670RDS

SUPPLEMENT-1

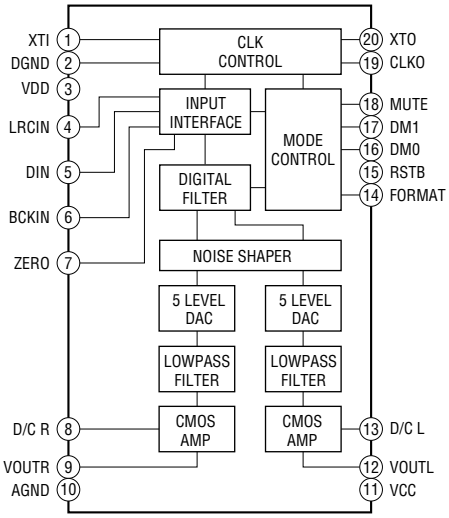
File this supplement with the service manual.

Subject:

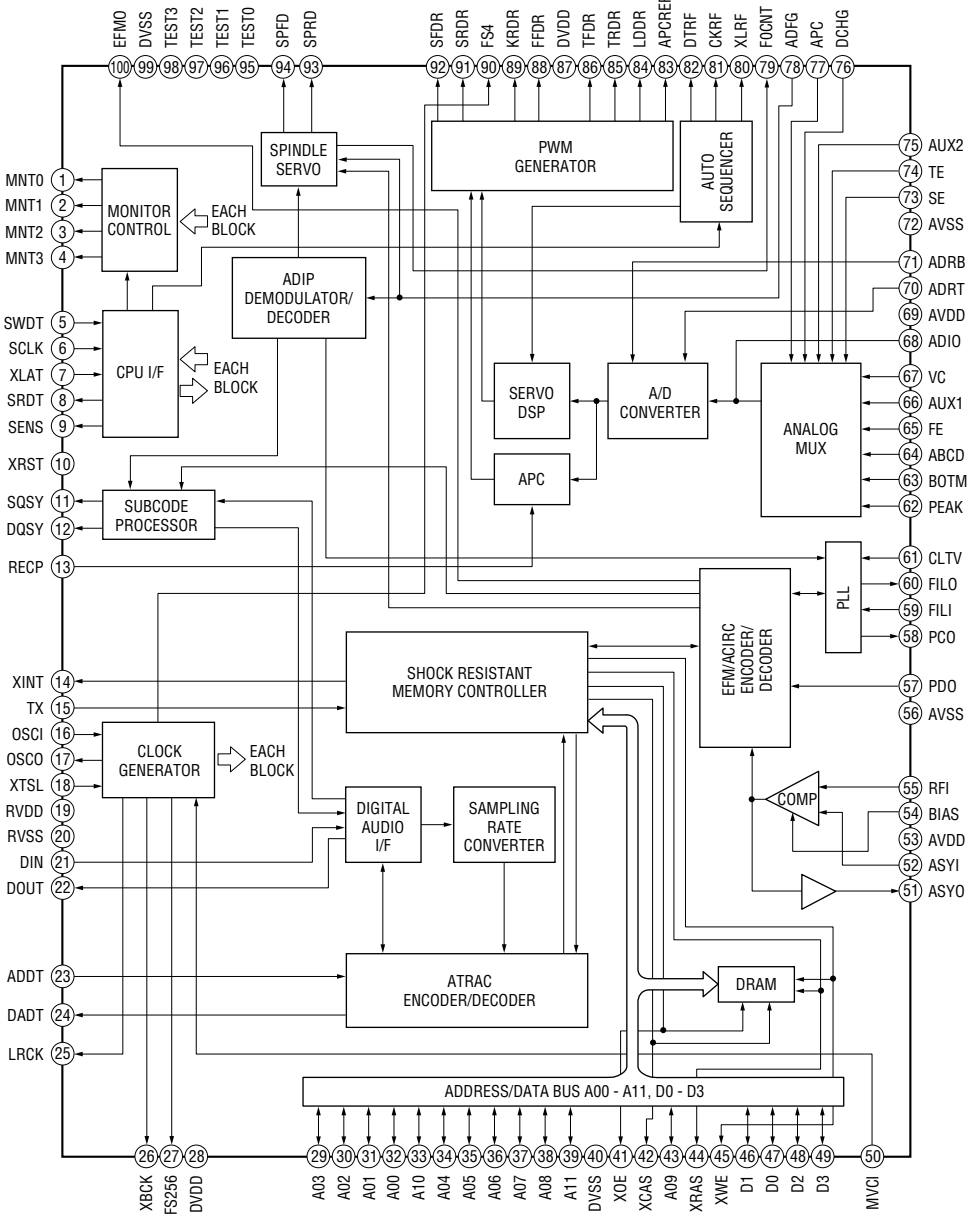
1. **IC BLOCK DIAGRAMS**
2. **BLOCK DIAGRAMS**
3. **IC PIN FUNCTION DESCRIPTION**

1. IC BLOCK DIAGRAMS
– MD Section –

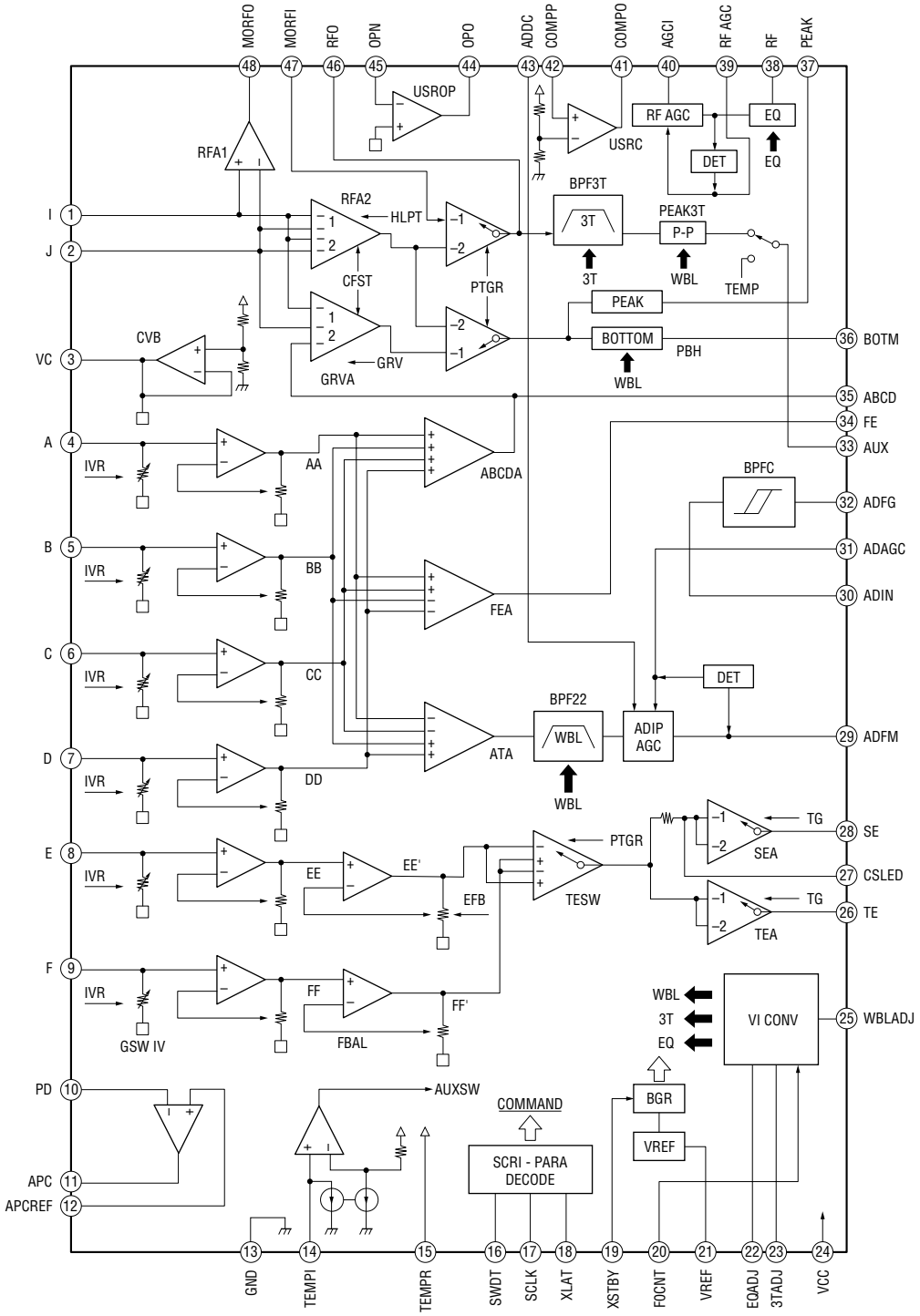
IC101 PCM1718E-T1



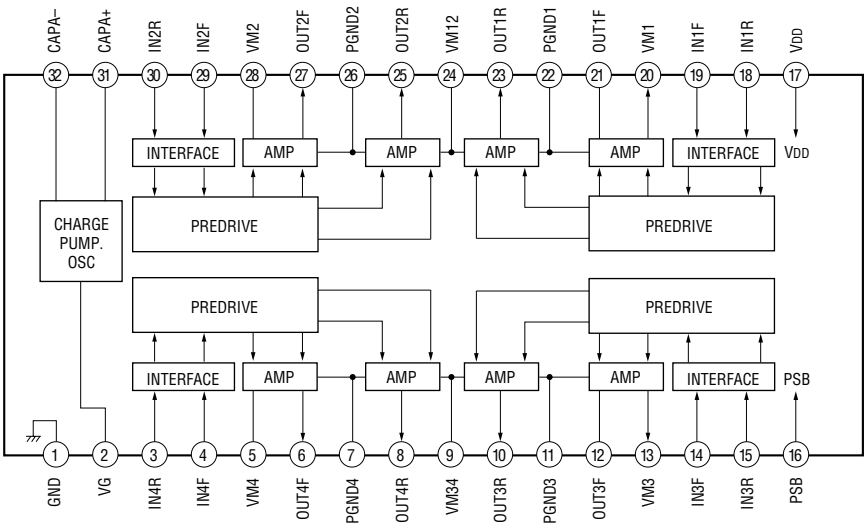
IC301 CXD2650R



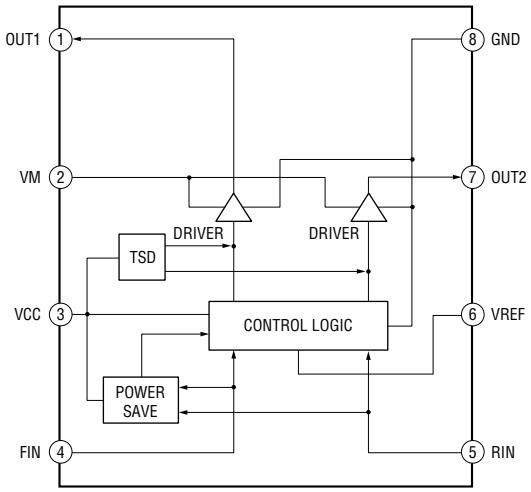
IC302 CXA2523R



IC303 BH6511FS-E2

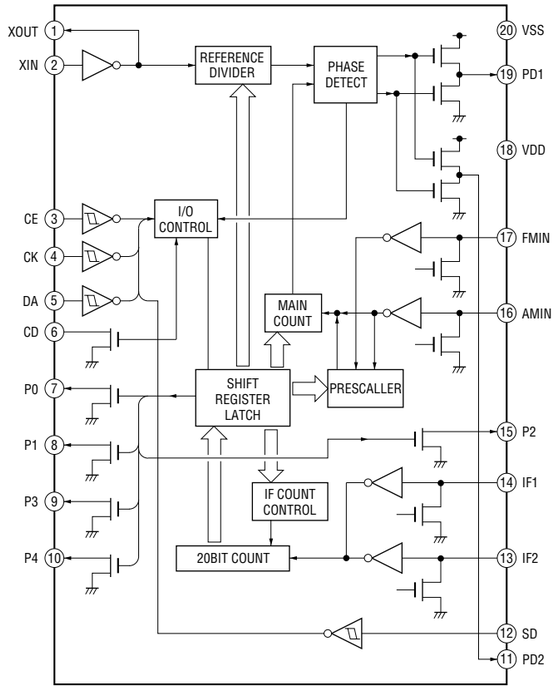


IC305 BA6287F

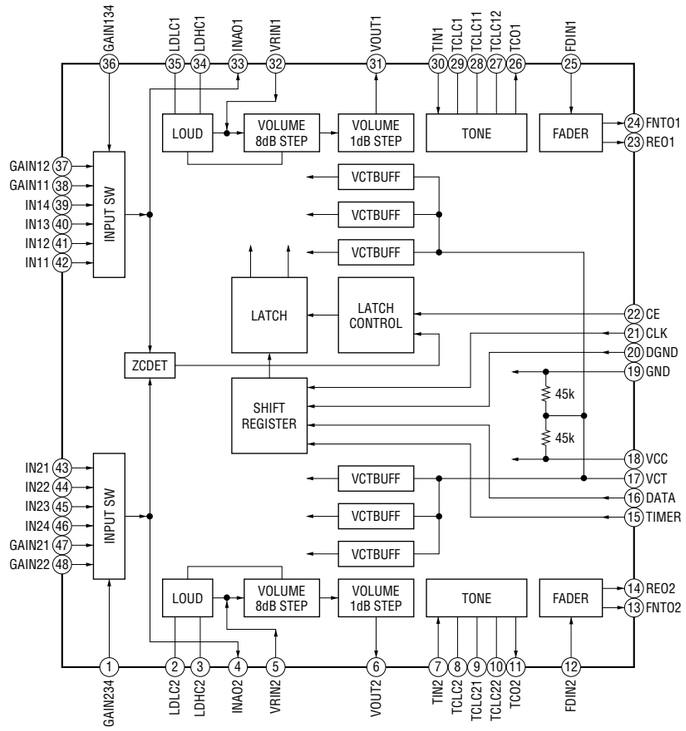


– MAIN Section –

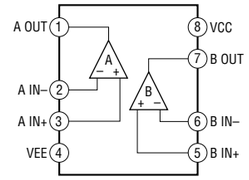
IC31 BU2624F-E2



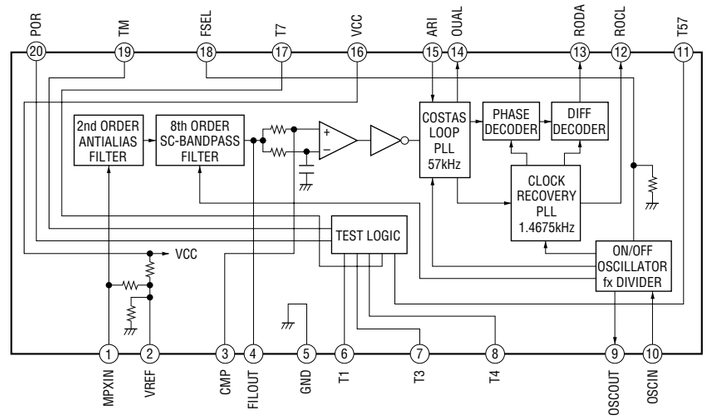
IC301 CXA1946BQ-T6



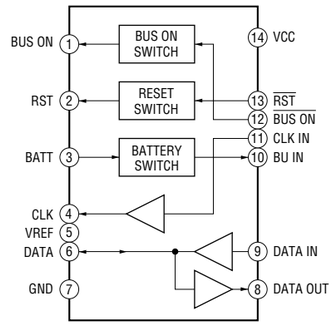
IC331 NJM4558V-TE2



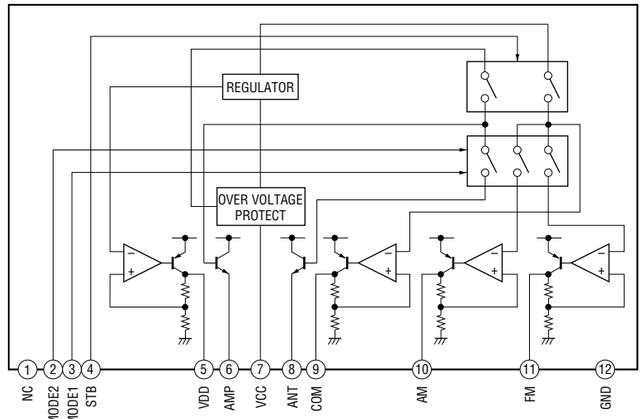
IC401 TDA7330BD-013TR (MDX-C670RDS)



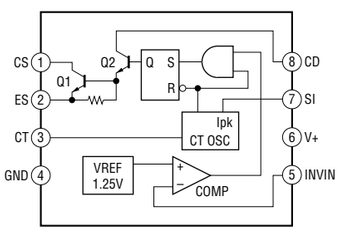
IC501 BA8270F-E2



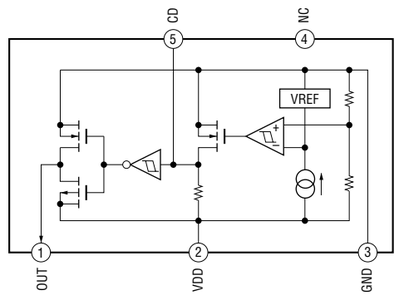
IC601 BA3918-V3



IC651 NJM2360AM (TE2)

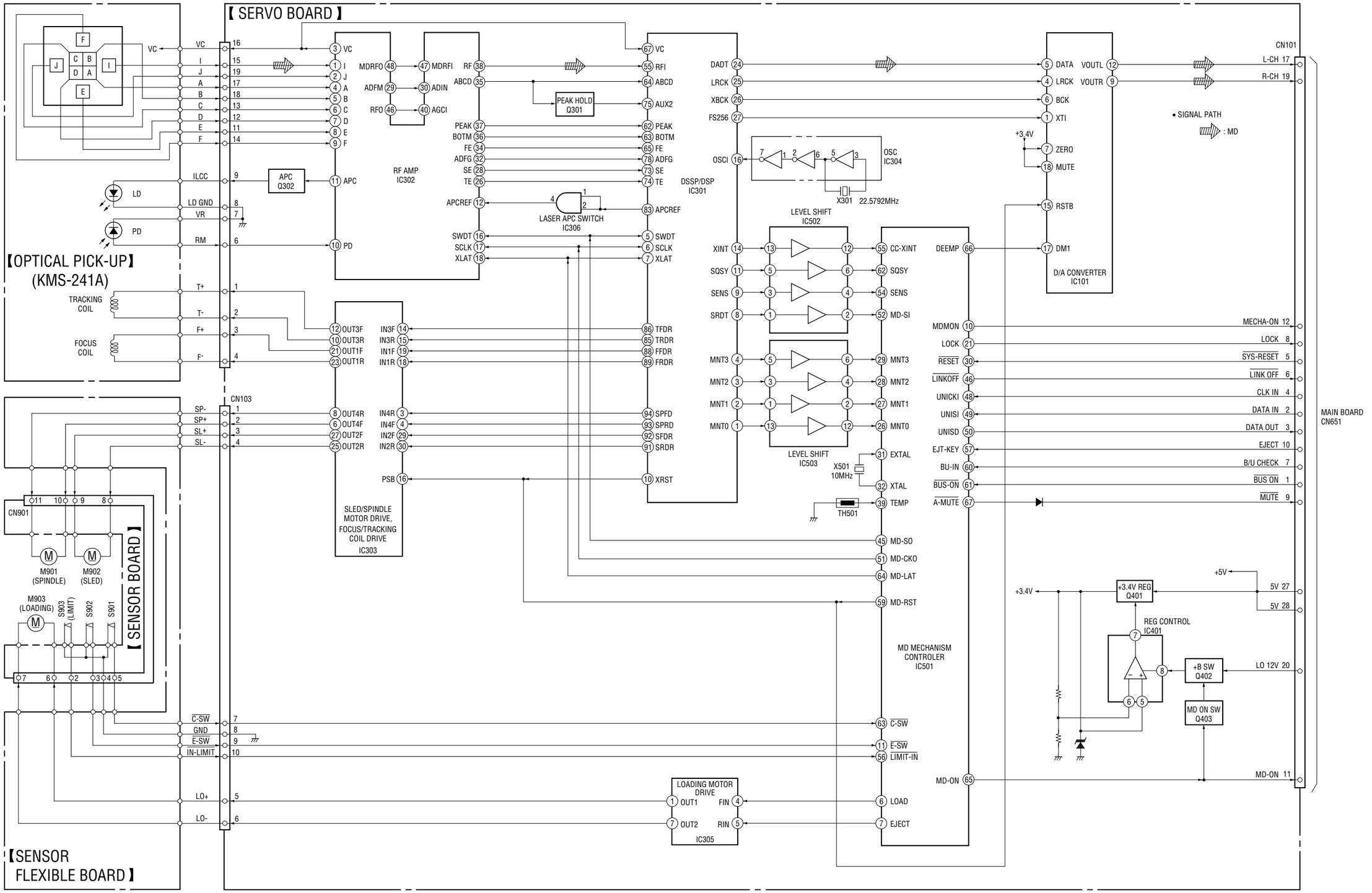


IC731 RN5VD23AA-TL

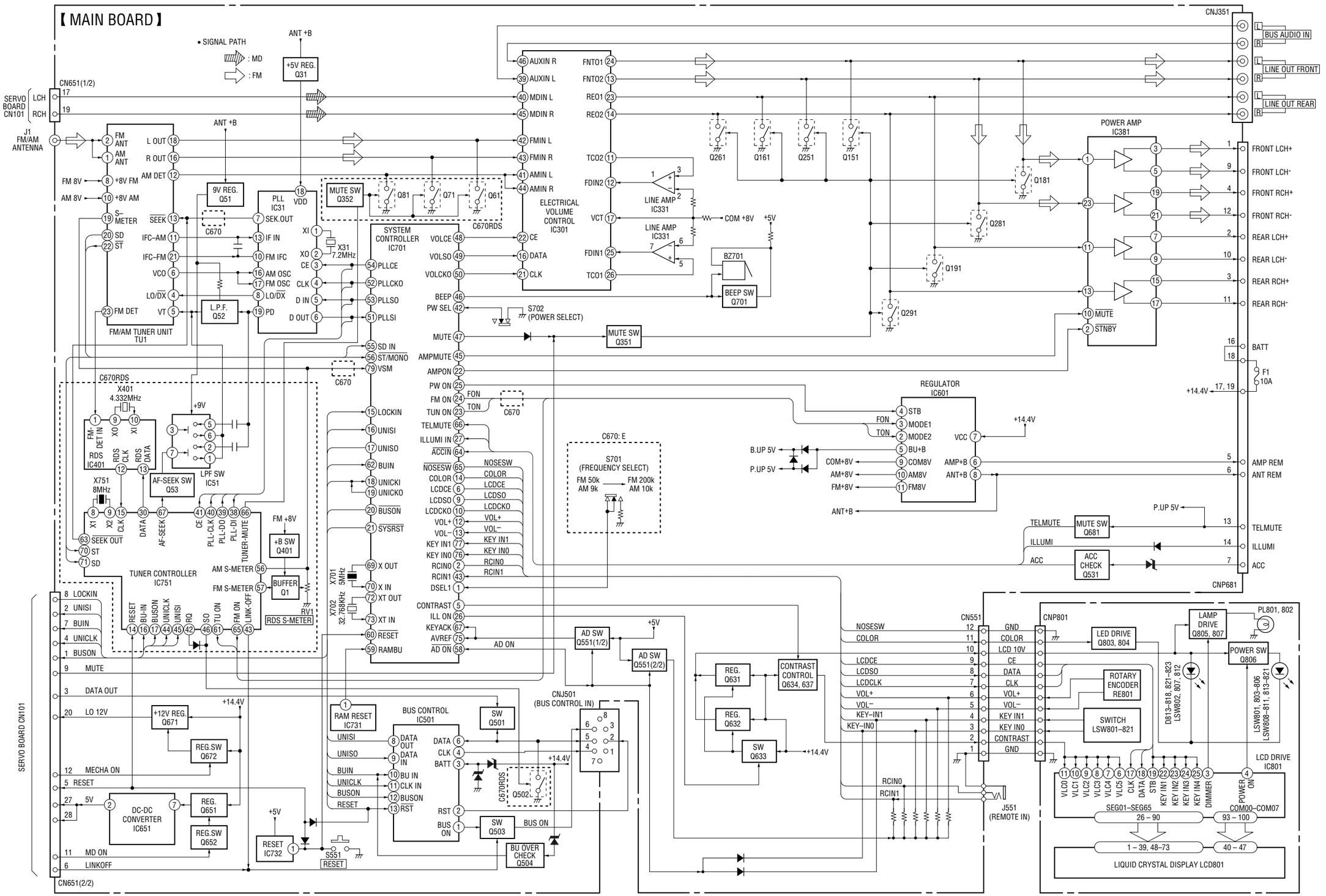


2. BLOCK DIAGRAMS

2-1. MD Section



2-2. MAIN/DISPLAY Section



3. IC PIN FUNCTION DESCRIPTION

3-1. SERVO BOARD IC501 CXP84340-049Q (MD MECHANISM CONTROLLER)

Pin No.	Pin Name	I/O	Function
1	TIN3	I/O	Input of 4×8 matrix test keys (“L” is always output, except in TEST mode) (Not used in this set) (open)
2	TIN4	I/O	
3	TIN5	I/O	
4	TIN6	I/O	
5	TIN7	I/O	
6	LOAD	O	Output of control for loading motor (M903) (Cartridge loading direction)
7	EJECT	O	Output of control for loading motor (M903) (Cartridge eject direction)
8	NCO	O	Not used (open)
9	NCO	O	
10	MDMON	O	Mechanical deck power ON
11	$\overline{\text{E SW}}$	I	Input of loading end switch (S902) “L”: Switch make
12	AGING	O	Output of aging status in TEST mode “H”: Aging completed “L”: Under aging (Not used in this set)
13	AGCHK	O	Output of status when aging completed in TEST mode “H”: Aging OK “L”: Aging NG (Not used in this set)
14	TFTON	O	Output of free run status in TEST mode “H”: Free run “L” : Normal (Not used in this set)
15	NCO	O	Not used (open)
16	NCO	O	
17	NCO	O	
18	DFCTSEL	I	Select whether DEFECT2 function is used for CXD2650R (IC301) “H”: Not used “L”: Used
19	DPLLSEL	I	Select whether DPLL function is used for CXD2650R (IC301) “H”: Not used “L”: Used
20	EMPHSEL	I	Select whether Emphasis signal is output from pin or UNILINK “H”: Output from pin “L”: Output from both pin and UNILINK
21	LOCK	O	Output of CLV LOCK status in TEST mode “H”: LOCK “L”: UNLOCK
22	NCO	O	Not used (open)
23	2M/$\overline{\text{4M}}$	I	Select DRAM 2M or 4M “H”: 2M (internal DRAM) “L”: 4M (external DRAM)
24	TAEG E	O	Output of mechanism aging completion in TEST mode (Not used in this set) (open)
25	NCO	O	Not used (open)
26	MNT0	I	Input of CXD2650R (IC301) monitor 0
27	MNT1	I	Input of CXD2650R (IC301) monitor 1
28	MNT2	I	Input of CXD2650R (IC301) monitor 2
29	MNT3	I	Input of CXD2650R (IC301) monitor 3
30	$\overline{\text{RESET}}$	I	Input of RESET signal
31	EXTAL	I	Input of SYSTEM CLOCK (10 MHz)
32	XTAL	O	Output of SYSTEM CLOCK (10 MHz)
33	VSS	–	Ground
34	TX	O	Output of CLOCK signal (32 kHz) for clock (Not used in this set) (open)
35	TEX	I	Input of CLOCK signal (32 kHz) for clock (Not used in this set) (Connected to the GND)
36	AVSS	–	Ground pin for A/D conversion input
37	AVREF	–	Input pin for A/D conversion input reference voltage
38	INIT	I	Initial input at the reset

Pin No.	Pin Name	I/O	Function
39	TEMP	I	A/D input for temperature detection
40	ACNT	I	A/D input to select the number of Load/Eject aging times 0H - 54H (30 times), 55H - OA9H (20 times), OAAH - OFFH (10 times)
41	DO SEL	I	A/D input to select digital output bits
42	EE CS	O	Output of EEPROM selection (Not used in this set) (open)
43	EE CKO	O	Serial clock output for EEPROM (Not used in this set) (open)
44	EE SIO	I/O	EEPROM data input/output (Not used in this set) (open)
45	MD SO	O	Data output to MD servo IC (SWDT of CXD2650R in this set)
46	LINKOFF	O	“LINKOFF” pin of SONY Bus “H”: LINKOFF “L”: LINK connected
47	UNIREQ	O	“REQUEST” pin of SONY Bus “H”: REQUEST ON (Not used in this set) (open)
48	UNICKI	I	“CLOCK IN” pin of SONY Bus
49	UNISI	I	“DATA IN” pin of SONY Bus
50	UNISO	O	“DATA OUT” pin of SONY Bus
51	MD CKO	O	“CLOCK OUT” pin to MD servo IC (CXD2650R in this set)
52	MD SI	I	“DATA IN” pin from MD servo IC (SRDT of CXD2650R in this set)
53	NCO	O	Not used (open)
54	SENS	I	“SENSE” input from MD servo IC (CXD2650R in this set)
55	CC XINT	I	Input of “XINT” interrupt signal from MD servo IC (CXD2650R in this set)
56	$\overline{\text{LIMIT IN}}$	I	Input of sled most inside track detection switch
57	EJT KEY	I	Input of EJECT key “L”: EJECT button ON
58	ERROR PWM	O	Output of C1 ATER (Not used in this set) (open)
59	$\overline{\text{MD RST}}$	O	Output of RESET to MD servo IC (XRST of CXD2650R in this set) /RF AMP IC (XRST of CXA2523R in this set)
60	BU IN	I	System power interruption check port
61	$\overline{\text{BUS ON}}$	I	“BUS ON” input pin of SONY Bus
62	SQSY	I	Input of “SUBQ Sync” from MD servo IC (CXD2650R in this set)
63	$\overline{\text{C SW}}$	I	Input of cartridge loading switch (S901) “H”: Cartridge eject completed “L”: Cartridge loading
64	MD LAT	O	Output of LATCH command to MD servo IC (XLAT of CXD2650R in this set)
65	MD ON	O	Power supply control to MD servo IC (CXD2650R in this set) “H”: Power on
66	DEEMP	O	Deemphasis control “H”: Deemphasis circuit ON
67	A MUTE	O	Output of audio mute “H”: Mute ON
68	NCO	O	Not used (open)
69	TSTCKO	O	Output of clock for TEST mode display (Not used in this set) (open)
70	TSTSO	O	Output of data for TEST mode display (Not used in this set) (open)
71	$\overline{\text{TSTMOD}}$	I	Input of TEST mode “H”: Normal “L”: TEST mode
72	VDD	–	Power supply
73	NC	–	NC pin (Connected to VDD)
74	TOUT0	O	Output of 4×8 matrix test keys (Not used in this set) (open)
75	TOUT1	O	
76	TOUT2	O	
77	TOUT3	O	
78	TIN0	I/O	Input of 4×8 matrix test keys (“L” is always output, except in TEST mode) (Not used in this set) (open)
79	TIN1	I/O	
80	TIN2	I/O	

3-2. MAIN BOARD IC701 μPD78058GC-969-3B9 (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Function
1	DSEL1	I	A/D input of initial setting for the destination
2	RCINO	I	A/D input of rotary commander
3	DSPSEL	I	Initial Setting of DSP control "H": DSP control "L": No DSP control (Not used in this set) (Connected to the GND)
4	AVSS	–	Ground pin for A/D converter
5	CONTRAST	O	Output for LCD view filed angle adjustment D/A output for LCD contrast adjustment
6	LCDCE	O	Output of LCD chip enable
7	AVREF	–	D/A conversion reference voltage
8	NCO	O	Not used (open)
9	LCDSO	O	Output of LCD serial data
10	LCDCKO	O	Output of LCD serial clock
11	9005C/D	O	Not used (open)
12	VOL +	I	Input of rotary encoder
13	VOL –	I	
14	COLOR	O	Output of illumination color switching control
15	LOCKIN	I	Input of LOCK "L": Sound skip
16	UNISI	I	Input of SONY BUS serial interface data
17	UNISO	O	Output of SONY BUS serial interface data
18	UNICKI	I	Input of SONY BUS serial interface clock
19	UNICKO	O	Output of SONY BUS serial interface clock
20	$\overline{\text{BUSON}}$	O	Output of bus ON control "L": SONY BUS communication is active
21	$\overline{\text{SYSRST}}$	O	Output of system reset control "L": SONY BUS slave micro computer is reset
22	AMPON	O	Output of power amplifier ON control
23	TUNON	O	Output of tuner ON control "H": Active (Not used in this set) (open)
24	FM ON	O	Output of FM ON control In FM mode: Active In AM mode: Inactive (Not used in this set) (open)
25	PW ON	O	System power ON control "H": Power ON "L": Power OFF
26	ILLON	O	Output of illumination ON control "H": ON "L": OFF
27	ILLUMI IN	I	Input of ILL line detection for auto dimmer control
28	FANMOTOR ON	O	Fan motor control (Not used in this set) (open)
29	NCO	O	Not used (open)
30	NCO	O	
31	NCO	O	
32	NCO	O	
33	GND	–	Ground
34	NCO	O	Not used (open)
35	NCO	O	
36	NCO	O	
37	NCO	O	
38	NCO	O	
39	NCO	O	
40	NCO	O	Not used (connected to the GND)

Pin No.	Pin Name	I/O	Function
41	NCO	O	Not used (open)
42	PW SEL	I	Power select initial setting
43	RCIN1	I	Input of rotary commander
44	TEST	O	Not used (open)
45	AMPMUTE	O	Power AMP mute control
46	BEEP	O	Output of buzzer control
47	MUTE	O	Output of system mute control
48	VOLCE	O	Output of electronic volume serial chip enable
49	VOLSO	O	Output of electronic volume serial data
50	VOLCKO	O	Output of electronic volume serial clock
51	PLLSI	I	Input of PLL serial data
52	PLLCKO	O	Output of PLL serial clock
53	PLLSO	O	Output of PLL serial data
54	PLLCE	O	Output of PLL serial chip enable
55	SD IN	I	Input of station detector detection “H”: SD detected
56	ST	I/O	In FM mode, stereo input, monaural output
57	DIMMER	O	Output of dimmer control
58	AD ON	O	Output of A/D converter ON control
59	RAMBU	I	Input of RAM reset detection
60	$\overline{\text{RESET}}$	I	Input of RESET “L”: RESET
61	SIRCS	I	Input of remote controller
62	BUIN	I	Input of backup power detection
63	$\overline{\text{DOORSW}}$	I	Not used (connected to the GND)
64	$\overline{\text{ACCIN}}$	I	Input of accessory power detection
65	$\overline{\text{NOSESW}}$	I	Input of front panel remove/attach detection.
66	TELMUTE	I	Input of telephone mute detection “H”: Mute ON
67	KEYACK	I	Key input acknowledge signal
68	VDD	–	Power supply
69	X OUT	O	Output of main ceramic oscillator (5 MHz)
70	X IN	I	Input of main ceramic oscillator (5 MHz)
71	GND	–	Ground
72	XT OUT	O	Output of sub crystal oscillator (32.768 kHz)
73	XT IN	I	Input of sub crystal oscillator (32.768 kHz)
74	AVDD	–	Power supply for A/D converter
75	AVREF	–	Reference voltage power supply for A/D converter
76	KEYIN0	I	Key input
77	KEYIN1	I	
78	KEYSEL	I	Function select pin
79	VSM	I	A/D input of signal meter common to FM and AM
80	DSEL0	I	A/D input of initial setting for the destination

3-3. MAIN BOARD IC751 MN1883220Y5D1 (TUNER CONTROLLER) (MDX-C670RDS)

Pin No.	Pin Name	I/O	Function
1	$\overline{RD}$	I	Read pulse input terminal of data (D0 to D3) (Not used in this set) (open)
2	BUSY	I	BUSY output monitor terminal (Not used in this set) (open)
3	D3	I/O	Command input/output (Not used in this set) (open)
4	D2	I/O	Command input/output (Not used in this set) (open)
5	D1	I/O	Command input/output (Not used in this set) (open)
6	D0	I/O	Command input/output (Not used in this set) (open)
7	VDD	–	Power supply (+5 V)
8	X1	O	System clock input (8.0 MHz)
9	X2	I	System clock output (8.0 MHz)
10	GND	–	Ground
11	XI	I	Connected to the GND
12	–	–	Not used (open)
13	XO	O	Connected to the GND
14	RESET	I	Reset input
15	RDS-CLK	I	RDS serial clock input pin
16	BU-IN	I	BATT voltage detection pin
17	BUSON	I	BUS ON control input pin
18-29	–	–	Not used (open)
30	RDS-DATA	I	RDS serial data input pin
31	–	–	Connected to the GND
32-35	–	–	Not used (open)
36	–	–	Connected to the GND
37	–	–	Connected to the GND
38	PLL-DI	I	PLL serial data input pin
39	PLL-DO	O	PLL serial data output pin
40	PLL-CLK	O	PLL serial clock output pin
41	CE	O	PLL serial chip enable output pin
42	RQ	O	Bus request signal output pin
43	LINK-OFF	O	Link-off signal output pin (for SONY BUS)
44	SCK	I	Serial clock input pin (for SONY BUS)
45	SI	I	Serial data input pin (for SONY BUS)
46	SO	O	Serial data output pin (for SONY BUS)
47	VDD	–	Power supply (+5 V)
48	AVDD	–	Power supply for A/D converter (+5 V)
49	VREF	–	Reference power supply (+5 V)
50, 51	–	–	Connect to the GND
52	SRAM-RST	I	SRAM reset signal input pin
53	MUTE-SEL	I	Muting select signal input pin (Not used in this set) (Connected to the GND)
54	MS-1	I	Destination setting pin (Not used in this set) (Connected to the GND)
55	MS-2	I	Destination setting pin (Not used in this set) (Connected to the GND)
56	AM-S.METER	I	AM signal meter voltage detection pin
57	FM-S.METER	I	FM signal meter voltage detection pin
58	–	–	Connected to the GND

Pin No.	Pin Name	I/O	Function
59	–	–	Connected to the GND
60	–	–	Connected to the GND
61	TU-ON	O	Tuner system power supply control pin
62	–	–	Not used (open)
63	$\overline{\text{SEEK.OUT}}$	O	Seek signal output pin
64	AM.ON	O	AM power supply control pin (Not used in this set) (open)
65	FM.ON	O	FM power supply control pin
66	TUNER-MUTE	O	Tuner muting signal output pin
67	AF-SEEK	O	AF seek signal output pin
68	–	–	Not used (open)
69	–	–	Not used (open)
70	ST-IN/MONO	I	Stereo detection signal input pin
71	SD-IN	I	Station detection signal input pin
72-75	–	–	Not used (open)
76	PDWN	O	Power down terminal (Not used in this set) (open)
77	TIM.RESET	O	Reset/power down terminal (Not used in this set) (open)
78	TIM.CE	O	Data permission/prohibition setting through D0 to D3 “H”: permission (Not used in this set) (open)
79	$\overline{\text{TIM.CE}}$	O	Data permission/prohibition setting through D0 to D3 “L”: permission (Not used in this set) (open)
80	$\overline{\text{WR}}$	I	Write pulse input terminal of data (D0 to D3) (Not used in this set) (open)

97E0581-1
Printed in Japan © 1997.5
Published by Quality Assurance Dept.

MDX-C670/C670RDS

SONY

SERVICE MANUAL

US Model
Canadian Model
E Model
MDX-C670
AEP Model
UK Model
MDX-C670RDS

SUPPLEMENT-2

File this supplement with the service manual.

Subject: Change of Main and Key Boards

(ECN-CS701801/CS701993)

TABLE OF CONTENTS

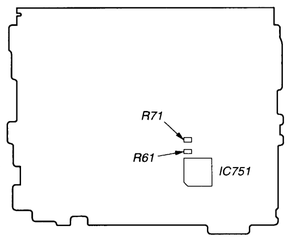
1. **SERVICE NOTE** 2
2. **NEW/FORMER DISCRIMINATION** 3
3. **DIAGRAMS**
   - 3-1. Printed Wiring Board –MAIN Section– 4
   - 3-2. Schematic Diagram –MAIN Section– 7
   - 3-3. Printed Wiring Board –DISPLAY Section– 12
   - 3-4. Schematic Diagram –DISPLAY Section– 15
4. **ELETRICAL PARTS LIST** 17

1. SERVICE NOTE

• **Note on replacing the MAIN board (German model)**
As the repair parts of MAIN board with mounted parts destined for German model, the MAIN board with mounted parts for AEP model is supplied.
Accordingly, when replacing the board, exchange two following parts.

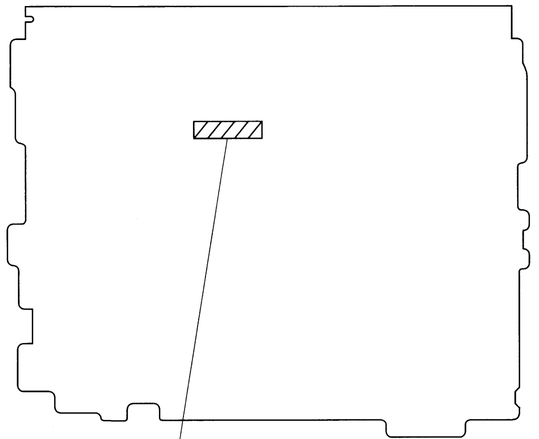
R61 10k → 3.3k (1-216-061-00)
R71 10k → 3.3k (1-216-061-00)

[MAIN BOARD] – Conductor Side –



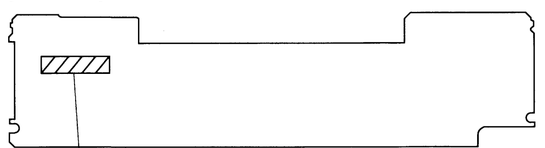
2. NEW/FORMER DISCRIMINATION

[MAIN BOARD] – Component Side –



Former Type: 1-664-152-11
New Type : 1-664-152-12

[KEY BOARD] – Conductor Side –



Former Type: 1-664-153-11
New Type : 1-664-153-12

3. DIAGRAMS

3-1. PRINTED WIRING BOARD – MAIN Section –

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D1	J-6	IC381	E-13
D31	H-17	IC401	J-4
D51	H-16	IC501	B-7
D351	H-5	IC601	A-15
D352	H-5	IC651	C-4
D353	J-8	IC701	F-3
D354	J-8	IC731	E-4
D355	G-9	IC732	C-2
D356	G-9	IC751	H-4
D381	E-8		
D401	I-18	Q1	I-3
D501	A-7	Q31	I-5
D502	A-7	Q51	I-6
D503	B-7	Q52	J-5
D504	B-7	Q53	I-7
D505	B-17	Q61	G-4
D531	C-7	Q71	G-5
D551	H-2	Q81	H-5
D552	D-4	Q151	I-8
D553	F-20	Q161	I-8
D554	H-20	Q181	H-8
D555	J-2	Q191	H-8
D556	J-2	Q251	I-9
D557	J-2	Q261	I-8
D558	G-20	Q281	H-9
D559	G-20	Q291	H-8
D560	G-20	Q351	H-6
D561	H-20	Q352	H-6
D562	G-20	Q401	I-4
D601	B-16	Q501	B-7
D602	B-16	Q502	B-7
D603	B-5	Q503	B-7
D604	B-5	Q504	A-4
D631	A-19	Q531	C-7
D651	C-3	Q551	D-3
D671	D-5	Q631	B-19
D681	E-8	Q632	B-19
D683	E-8	Q633	B-2
D684	C-13	Q634	F-2
D701	G-3	Q637	F-2
D751	H-4	Q651	C-5
		Q652	C-5
IC31	I-5	Q671	D-6
IC51	I-7	Q672	C-5
IC301	F-6	Q681	D-9
IC331	G-6	Q701	D-2

Note:

- ○——— : parts extracted from the component side.
- ● : Through hole.
- △ : internal component.
- ▒▒▒ : Pattern of the rear side.

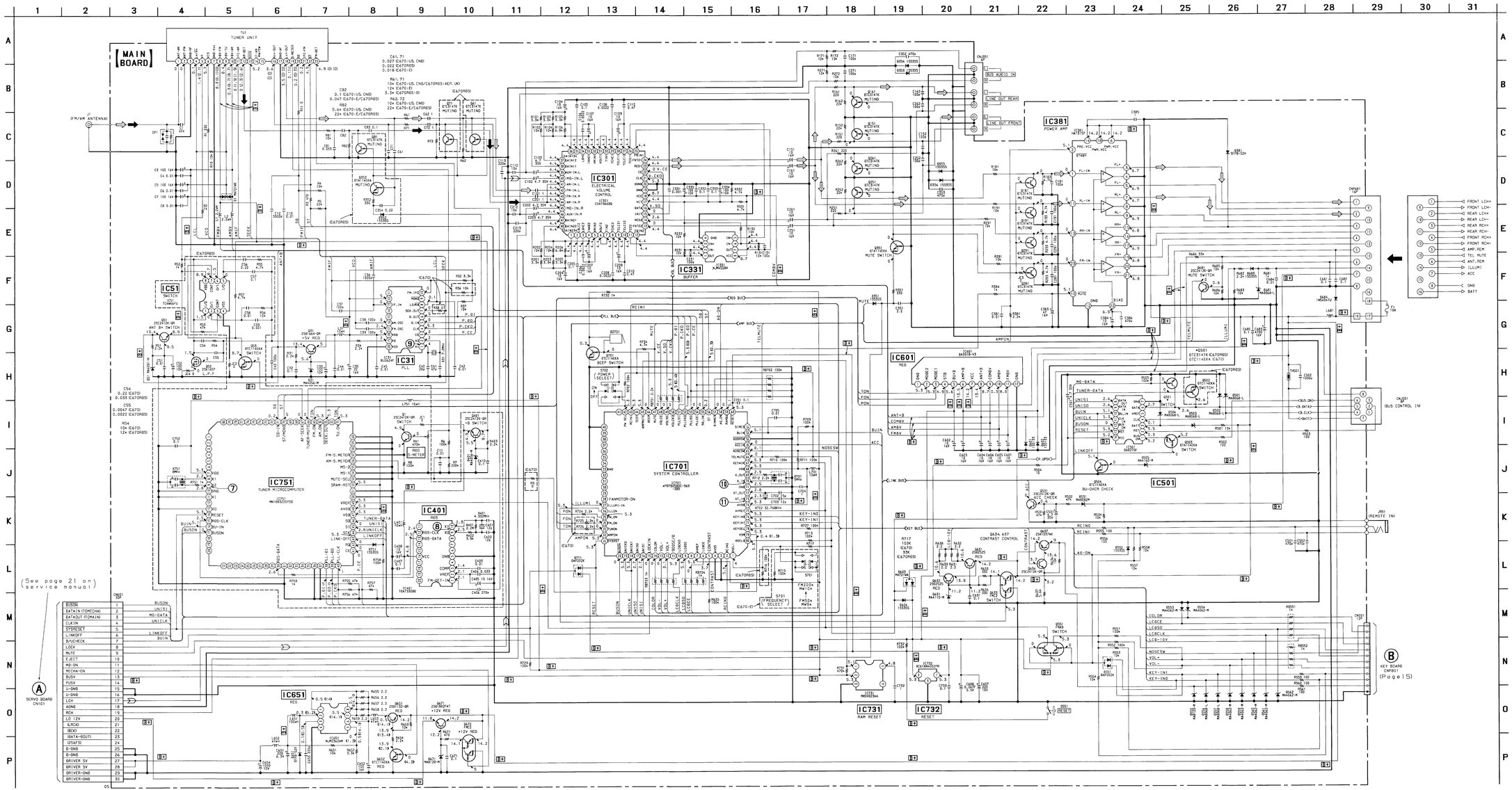
(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

【MAIN BOARD】(COMPONENT SIDE)

【MAIN BOARD】(CONDUCTOR SIDE)

3-2. SCHEMATIC DIAGRAM – MAIN Section –



• **Semiconductor Location**

Ref. No.	Location
D802	C-9
D803	C-8
D804	C-8
D805	A-10
D806	C-3
D807	C-9
D808	C-10
D809	A-10
D813	C-3
D814	B-3
D815	B-2
D816	C-2
D817	A-3
D818	A-8
D819	B-3
D820	C-2
D821	C-2
D822	C-3
D823	C-2
IC801	B-6
Q803	A-10
Q804	A-10
Q805	A-2
Q806	B-3
Q807	A-2

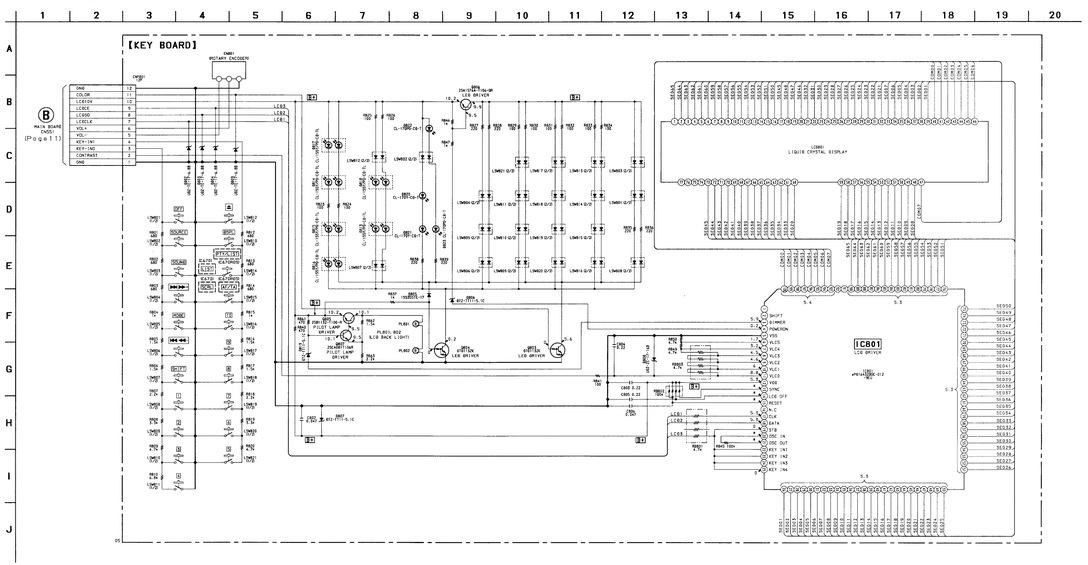
Note:
- ⟜ : parts extracted from the component side.
- ● : Through hole.
- : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

3-3. PRINTED WIRING BOARD – DISPLAY Section –

3-4. SCHEMATIC DIAGRAM – DISPLAY Section –



Note:
- All capacitors are in µF unless otherwise noted. pF: µµF. 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- B+ : B+ Line.
- : panel designation.
- Power voltage is dc 14.4 V and fed with regulated dc power supply from BATT and ACC terminals.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions. no mark : FM
- Voltages are taken with a VOM (10 MΩ/V). Voltage variations may be noted due to normal production tolerances.

4. ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA. . : μA. . uPA. . : μPA. .
  uPB. . : μPB. . uPC. . : μPC. .
  uPD. . : μPD. .
- CAPACITORS
  uF: μF
- COILS
  uH: μH

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark
		KEY BOARD	
		*********	
*	3-009-268-01	SHEET, DIFFUSION	
*	3-010-426-01	PLATE (LCD), LIGHT GUIDE	
*	3-010-427-01	HOLDER (LCD)	
		< CAPACITOR >	
C802	1-165-176-11	CERAMIC CHIP 0.047uF 10% 16V	
C803	1-115-467-11	CERAMIC CHIP 0.22uF 10% 10V	
C804	1-115-467-11	CERAMIC CHIP 0.22uF 10% 10V	
C805	1-115-467-11	CERAMIC CHIP 0.22uF 10% 10V	
C806	1-165-176-11	CERAMIC CHIP 0.047uF 10% 16V	
		< CONNECTOR >	
CNP801	1-764-423-11	PIN, CONNECTOR 12P	
		< DIODE >	
D802	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D803	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D804	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D805	8-719-988-62	DIODE 1SS355	
D806	8-719-977-00	DIODE DTZ5.1C	
D807	8-719-977-00	DIODE DTZ5.1C	
D808	8-719-978-69	DIODE DTZ-TT11-16B	
D809	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D813	8-719-987-45	DIODE CL-155Y/PG-CD	
D814	8-719-987-45	DIODE CL-155Y/PG-CD	
D815	8-719-987-45	DIODE CL-155Y/PG-CD	
D816	8-719-987-45	DIODE CL-155Y/PG-CD	
D817	8-719-987-45	DIODE CL-155Y/PG-CD	
D818	8-719-987-45	DIODE CL-155Y/PG-CD	
D819	8-719-977-00	DIODE DTZ5.1C	
D820	8-719-033-13	DIODE CL-170Y-CD-T	
D821	8-719-033-13	DIODE CL-170Y-CD-T	
D822	8-719-033-14	DIODE CL-170PG-CD-T	
D823	8-719-033-14	DIODE CL-170PG-CD-T	

Ref. No.	Part No.	Description	Remark
		< ROTARY ENCODER >	
EN801	1-475-014-11	ENCODER, ROTARY	
		< IC >	
IC801	8-759-397-71	IC uPD16432BGC-012-9EU	
		< LIQUID CRYSTAL DISPLAY >	
LCD801	1-801-660-11	DISPLAY PANEL, LIQUID CRYSTAL	
		< SWITCH >	
LSW801	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (OFF)	
LSW802	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (SOURCE)	
LSW803	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (SOUND)	
LSW804	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (▶▶I ▶▶ +)	
LSW805	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (MODE)	
LSW806	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (I◀◀ ◀◀ –)	
LSW807	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (SHIFT)	
LSW808	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (1)	
LSW809	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (2)	
LSW810	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (3)	
LSW811	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (4)	
LSW812	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (⏏)	
LSW813	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (DSPL)	
LSW814	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (LIST)	(MDX-C670)
LSW814	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (PTY/LIST)	(MDX-C670RDS)
LSW815	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (SCRL)	(MDX-C670)
LSW815	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (AF/TA)	(MDX-C670RDS)
LSW816	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (10)	
LSW817	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (9)	
LSW818	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (8)	
LSW819	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (7)	
LSW820	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (6)	
LSW821	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (5)	

KEY **MAIN**

Ref. No.	Part No.	Description				Remark
		< PILOT LAMP >				
PL801	1-517-630-31	LAMP, PILOT (LCD BACK LIGHT)				
PL802	1-517-630-31	LAMP, PILOT (LCD BACK LIGHT)				
		< TRANSISTOR >				
Q803	8-729-904-78	TRANSISTOR DTD113ZK				
Q804	8-729-904-66	TRANSISTOR DTD113EK				
Q805	8-729-106-60	TRANSISTOR 2SB1115A				
Q806	8-729-026-53	TRANSISTOR 2SA1576A-T106-QR				
Q807	8-729-905-35	TRANSISTOR 2SC4081T106R				
		< RESISTOR >				
R801	1-219-286-11	METAL GLAZE	680	2%	1/16W	
R802	1-219-286-11	METAL GLAZE	680	2%	1/16W	
R803	1-219-286-11	METAL GLAZE	680	2%	1/16W	
R804	1-218-847-11	METAL GLAZE	1K	2%	1/16W	
R805	1-218-851-11	METAL GLAZE	1.5K	2%	1/16W	
R806	1-218-851-11	METAL GLAZE	1.5K	2%	1/16W	
R807	1-218-855-11	METAL GLAZE	2.2K	2%	1/16W	
R808	1-218-859-11	METAL GLAZE	3.3K	2%	1/16W	
R809	1-218-863-11	METAL GLAZE	4.7K	2%	1/16W	
R810	1-218-867-11	METAL GLAZE	6.8K	2%	1/16W	
R812	1-219-286-11	METAL GLAZE	680	2%	1/16W	
R813	1-219-286-11	METAL GLAZE	680	2%	1/16W	
R814	1-219-286-11	METAL GLAZE	680	2%	1/16W	
R815	1-218-847-11	METAL GLAZE	1K	2%	1/16W	
R816	1-218-851-11	METAL GLAZE	1.5K	2%	1/16W	
R817	1-218-851-11	METAL GLAZE	1.5K	2%	1/16W	
R818	1-218-855-11	METAL GLAZE	2.2K	2%	1/16W	
R819	1-218-859-11	METAL GLAZE	3.3K	2%	1/16W	
R820	1-218-863-11	METAL GLAZE	4.7K	2%	1/16W	
R823	1-216-809-11	METAL CHIP	100	5%	1/16W	
R824	1-216-809-11	METAL CHIP	100	5%	1/16W	
R825	1-216-809-11	METAL CHIP	100	5%	1/16W	
R826	1-216-809-11	METAL CHIP	100	5%	1/16W	
R827	1-216-033-00	METAL CHIP	220	5%	1/10W	
R828	1-216-033-00	METAL CHIP	220	5%	1/10W	
R829	1-216-809-11	METAL CHIP	100	5%	1/16W	
R830	1-216-809-11	METAL CHIP	100	5%	1/16W	
R831	1-216-809-11	METAL CHIP	100	5%	1/16W	
R832	1-216-809-11	METAL CHIP	100	5%	1/16W	
R833	1-216-809-11	METAL CHIP	100	5%	1/16W	
R834	1-216-809-11	METAL CHIP	100	5%	1/16W	
R835	1-216-033-00	METAL CHIP	220	5%	1/10W	
R836	1-216-033-00	METAL CHIP	220	5%	1/10W	
R837	1-218-847-11	METAL GLAZE	1K	2%	1/16W	
R838	1-216-033-00	METAL CHIP	220	5%	1/10W	
R839	1-216-033-00	METAL CHIP	220	5%	1/10W	
R840	1-216-817-11	METAL CHIP	470	5%	1/16W	
R841	1-216-809-11	METAL CHIP	100	5%	1/16W	
R845	1-218-895-11	METAL GLAZE	100K	2%	1/16W	
R846	1-218-847-11	METAL GLAZE	1K	2%	1/16W	
R847	1-218-847-11	METAL GLAZE	1K	2%	1/16W	
R849	1-218-863-11	METAL GLAZE	4.7K	2%	1/16W	
R850	1-218-863-11	METAL GLAZE	4.7K	2%	1/16W	
R861	1-216-817-11	METAL CHIP	470	5%	1/16W	
R862	1-218-851-11	METAL GLAZE	1.5K	2%	1/16W	
R863	1-218-855-11	METAL GLAZE	2.2K	2%	1/16W	
		< CONPOSITION CIRCUIT BLOCK >				
RB801	1-233-414-11	RES, CHIP NETWORK 4.7K (3216)				
RB802	1-233-810-21	RES, NETWORK 100K (3216)				
RB803	1-233-414-11	RES, CHIP NETWORK 4.7K (3216)				
**********						
*	A-3309-843-A	MAIN BOARD, COMPLETE (MDX-C670: E)				
*	A-3309-846-A	MAIN BOARD, COMPLETE (MDX-C670: US, Canadian)				
*	A-3309-853-A	MAIN BOARD, COMPLETE (MDX-C670RDS)				
		**********				
*	3-011-077-11	HEAT SINK				
*	3-011-078-01	BRACKET (POWER IC)				
*	3-011-090-01	BRACKET (AMP)				
*	3-015-212-01	SHEET (SHAFT)				
	7-685-793-09	SCREW +PTT 2.6X8 (S)				
		< BUZZER >				
BZ701	1-504-920-11	BUZZER				
		< CAPACITOR >				
C1	1-163-235-11	CERAMIC CHIP	22PF	5%	50V	
C3	1-126-933-11	ELECT	100uF	20%	16V	
C4	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C5	1-126-933-11	ELECT	100uF	20%	16V	
C6	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C7	1-126-933-11	ELECT	100uF	20%	16V	
C8	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C10	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C11	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C12	1-163-053-00	CERAMIC CHIP	0.0033uF	10%	50V	
C32	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C33	1-126-177-11	ELECT	100uF	20%	10V	
C35	1-126-514-11	ELECT	22uF	20%	16V	
C36	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	
C37	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C38	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C39	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C40	1-163-234-11	CERAMIC CHIP	20PF	5%	50V	
C41	1-163-243-11	CERAMIC CHIP	47PF	5%	50V	
C42	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C43	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C44	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C45	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C51	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C52	1-126-177-11	ELECT	100uF	20%	10V	

Ref. No.	Part No.	Description				Remark
C54	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V	
						(MDX-C670RDS)
C54	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V	
						(MDX-C670)
C55	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V	
						(MDX-C670)
C55	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	
						(MDX-C670RDS)
C56	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V	
						(MDX-C670RDS)
C57	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
						(MDX-C670RDS)
C58	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
						(MDX-C670RDS)
C59	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	
						(MDX-C670RDS)
C61	1-163-062-00	CERAMIC CHIP	0.018uF	10%	50V	
						(MDX-C670: E)
C61	1-163-063-00	CERAMIC CHIP	0.022uF	10%	50V	
						(MDX-C670RDS)
C61	1-163-064-00	CERAMIC CHIP	0.027uF	10%	50V	
						(MDX-C670: US, Canadian)
C62	1-109-982-11	CERAMIC CHIP	1uF	10%	10V	
C71	1-163-062-00	CERAMIC CHIP	0.018uF	10%	50V	
						(MDX-C670: E)
C71	1-163-063-00	CERAMIC CHIP	0.022uF	10%	50V	
						(MDX-C670RDS)
C71	1-163-064-00	CERAMIC CHIP	0.027uF	10%	50V	
						(MDX-C670: US, Canadian)
C72	1-109-982-11	CERAMIC CHIP	1uF	10%	10V	
C81	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V	
C82	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V	
						(MDX-C670: E/MDX-C670RDS)
C82	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
						(MDX-C670: US, Canadian)
C83	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C101	1-107-682-11	CERAMIC CHIP	1uF	10%	16V	
C102	1-115-866-11	ELECT	4.7uF	20%	35V	
C103	1-115-866-11	ELECT	4.7uF	20%	35V	
C104	1-126-791-11	ELECT	10uF	20%	16V	
C105	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C106	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	
C107	1-126-791-11	ELECT	10uF	20%	16V	
C108	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	
C109	1-126-791-11	ELECT	10uF	20%	16V	
C110	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V	
C112	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V	
C113	1-163-259-00	CERAMIC CHIP	220PF	5%	50V	
C131	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C151	1-126-059-11	ELECT	10uF	20%	16V	
C152	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C161	1-126-059-11	ELECT	10uF	20%	16V	
C162	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C171	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C181	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C191	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	

Ref. No.	Part No.	Description				Remark
C201	1-107-682-11	CERAMIC CHIP	1uF	10%	16V	
C202	1-115-866-11	ELECT	4.7uF	20%	35V	
C203	1-115-866-11	ELECT	4.7uF	20%	35V	
C204	1-126-791-11	ELECT	10uF	20%	16V	
C205	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C206	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100	
C207	1-126-791-11	ELECT	10uF	20%	16V	
C208	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	
C209	1-126-791-11	ELECT	10uF	20%	16V	
C210	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V	
C212	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V	
C213	1-163-259-00	CERAMIC CHIP	220PF	5%	50V	
C231	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C251	1-126-059-11	ELECT	10uF	20%	16V	
C252	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C261	1-126-059-11	ELECT	10uF	20%	16V	
C262	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C271	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C281	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C291	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C331	1-163-205-00	CERAMIC CHIP	0.001uF	5%	50V	
C332	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C333	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C334	1-126-177-11	ELECT	100uF	20%	10V	
C335	1-126-177-11	ELECT	100uF	20%	10V	
C351	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C352	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	
C353	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	
C354	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V	
						(MDX-C670RDS)
C381	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C383	1-126-786-11	ELECT	47uF	20%	16V	
C384	1-126-791-11	ELECT	10uF	20%	16V	
C385	1-107-682-11	CERAMIC CHIP	1uF	10%	16V	
C386	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	
C401	1-163-229-11	CERAMIC CHIP	12PF	5%	50V	
						(MDX-C670RDS)
C402	1-163-229-11	CERAMIC CHIP	12PF	5%	50V	
						(MDX-C670RDS)
C403	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
						(MDX-C670RDS)
C404	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V	
						(MDX-C670RDS)
C405	1-126-791-11	ELECT	10uF	20%	16V	
						(MDX-C670RDS)
C406	1-163-127-00	CERAMIC CHIP	270PF	5%	50V	
						(MDX-C670RDS)
C407	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
						(MDX-C670RDS)
C408	1-126-791-11	ELECT	10uF	20%	16V	
						(MDX-C670RDS)
C410	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
						(MDX-C670RDS)
C501	1-115-866-11	ELECT	4.7uF	20%	35V	
C502	1-137-364-11	FILM	0.001uF	5%	50V	

MAIN

Ref. No.	Part No.	Description				Remark
C531	1-115-866-11	ELECT	4.7uF	20%	35V	
C551	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	
C552	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	
C601	1-126-791-11	ELECT	10uF	20%	16V	
C602	1-126-791-11	ELECT	10uF	20%	16V	
C603	1-126-791-11	ELECT	10uF	20%	16V	
C604	1-126-791-11	ELECT	10uF	20%	16V	
C605	1-126-791-11	ELECT	10uF	20%	16V	
C606	1-126-791-11	ELECT	10uF	20%	16V	
C607	1-126-923-11	ELECT	220uF	20%	10V	
C608	1-125-701-11	CAPACITOR	0.047F		5.5V	
C631	1-104-329-11	CERAMIC CHIP	0.1uF	10%	50V	
C651	1-124-635-00	ELECT	220uF	20%	6.3V	
C652	1-126-933-11	ELECT	100uF	20%	16V	
C653	1-163-259-00	CERAMIC CHIP	220PF	5%	50V	
C654	1-124-473-11	ELECT	1000uF	20%	10V	
C671	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C681	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C682	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C683	1-126-016-11	ELECT	4700uF	20%	16V	
C684	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C685	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C701	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C702	1-163-231-11	CERAMIC CHIP	15PF	5%	50V	
C703	1-163-229-11	CERAMIC CHIP	12PF	5%	50V	
C704	1-107-682-11	CERAMIC CHIP	1uF	10%	16V	
C705	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C732	1-109-982-11	CERAMIC CHIP	1uF	10%	10V	
C733	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C752	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	(MDX-C670RDS)
		< CONNECTOR >				
CN551	1-764-422-11	PLUG, CONNECTOR 12P				
CN651	1-764-617-12	PIN, CONNECTOR (PC BOARD) 30P				
		< JACK >				
CNJ351	1-774-700-11	JACK, PIN 6P (BUS AUDIO IN/LINE OUT)				
CNJ501	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL IN)				
		< CONNECTOR >				
CNP681	1-774-701-11	PIN, CONNECTOR 16P				
		< CONPOSITION CIRCUIT BLOCK >				
CP1	1-519-504-11	GAP, DISCHARGE				
		< DIODE >				
D1	8-719-040-04	DIODE MA721WK- (TX)				
D31	8-719-034-42	DIODE MA4056-M (QZ)				
D51	8-719-034-63	DIODE MA4091-H (QZ)				
D351	8-719-988-62	DIODE 1SS355				
D352	8-719-988-62	DIODE 1SS355 (MDX-C670RDS)				
D353	8-719-988-62	DIODE 1SS355				
D354	8-719-988-62	DIODE 1SS355				
D355	8-719-988-62	DIODE 1SS355				
D356	8-719-988-62	DIODE 1SS355				
D381	8-719-313-73	DIODE SFPB-52				
D401	8-719-034-42	DIODE MA4056-M (QZ) (MDX-C670RDS)				
D501	8-719-017-62	DIODE MA8068-L-TX				
D502	8-719-017-62	DIODE MA8068-L-TX				
D503	8-719-017-62	DIODE MA8068-L-TX				
D504	8-719-017-62	DIODE MA8068-L-TX				
D505	8-719-034-90	DIODE MA4160-M (QZ)				
D531	8-719-420-14	DIODE MA8082-M				
D551	8-719-914-44	DIODE DAP202K				
D552	8-719-988-62	DIODE 1SS355				
D553	8-719-034-46	DIODE MA4062-M (QZ)				
D554	8-719-034-46	DIODE MA4062-M (QZ)				
D555	8-719-423-32	DIODE MA8120-M				
D556	8-719-017-62	DIODE MA8068-L-TX				
D557	8-719-017-62	DIODE MA8068-L-TX				
D558	8-719-034-46	DIODE MA4062-M (QZ)				
D559	8-719-034-46	DIODE MA4062-M (QZ)				
D560	8-719-034-46	DIODE MA4062-M (QZ)				
D561	8-719-034-46	DIODE MA4062-M (QZ)				
D562	8-719-034-46	DIODE MA4062-M (QZ)				
D601	8-719-050-86	DIODE 1SS133T-91S				
D602	8-719-050-86	DIODE 1SS133T-91S				
D603	8-719-041-79	DIODE MA721WA-TX				
D604	8-719-988-62	DIODE 1SS355				
D631	8-719-034-70	DIODE MA4110-M (QZ)				
D651	8-719-313-73	DIODE SFPB-52				
D671	8-719-423-32	DIODE MA8120-M				
D681	8-719-017-62	DIODE MA8068-L-TX				
D683	8-719-988-62	DIODE 1SS355				
D684	8-719-052-59	DIODE 1N5404TU-15				
D701	8-719-914-44	DIODE DAP202K				
D751	8-719-988-62	DIODE 1SS355 (MDX-C670RDS)				
		< IC >				
IC31	8-759-448-84	IC BU2624F-E2				
IC51	8-759-184-64	IC TC4W66FU (MDX-C670RDS)				
IC301	8-752-078-67	IC CXA1946BQ-T6				
IC331	8-759-278-58	IC NJM4558V-TE2				
IC381	8-759-448-48	IC HA13157				
IC401	8-759-163-63	IC TDA7330BD-013TR (MDX-C670RDS)				
IC501	8-759-449-89	IC BA8270F-E2				
IC601	8-759-347-50	IC BA3918-V3				
IC651	8-759-337-67	IC NJM2360AM (TE2)				
IC701	8-759-458-35	IC uPD78058GC-461-3B9 (MDX-C670)				
IC701	8-759-472-95	IC uPD78058GC-969-3B9 (MDX-C670RDS)				
IC731	8-759-344-91	IC RN5VD23AA-TL				
IC732	8-759-363-81	IC XC61AN4002PR				
IC751	8-759-456-16	IC MN1883220Y5D1 (MDX-C670RDS)				

Ref. No.	Part No.	Description	Remark
		< JACK >	
J1	1-764-808-14	JACK (ANT) (FM/AM ANTENNA)	
J551	1-566-822-41	JACK (REMOTE IN)	
		< CHIP CONDUCTOR >	
JC1	1-216-296-00	CONDUCTOR, CHIP (3216) (MDX-C670RDS)	
JC2	1-216-296-00	CONDUCTOR, CHIP (3216) (MDX-C670RDS)	
JC3	1-216-295-00	CONDUCTOR, CHIP (2012)	
JC4	1-216-296-00	CONDUCTOR, CHIP (3216)	
		< COIL >	
L1	1-414-146-31	INDUCTOR 2.2uH	
L2	1-414-146-31	INDUCTOR 2.2uH	
L31	1-410-509-61	INDUCTOR 10uH	
L401	1-410-509-61	INDUCTOR 10uH (MDX-C670RDS)	
L651	1-412-537-31	INDUCTOR 100uH	
L652	1-412-533-21	INDUCTOR 47uH	
L653	1-412-533-21	INDUCTOR 47uH	
L681	1-411-669-12	COIL, CHOKE	
L701	1-410-509-61	INDUCTOR 10uH	
L751	1-410-509-61	INDUCTOR 10uH (MDX-C670RDS)	
		< TRANSISTOR >	
Q1	8-729-120-28	TRANSISTOR 2SC1623-L5L6 (MDX-C670RDS)	
Q31	8-729-920-85	TRANSISTOR 2SD1664-QR	
Q51	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q52	8-729-021-94	TRANSISTOR 2SK1657-T1B	
Q53	8-729-900-53	TRANSISTOR DTC114EK (MDX-C670RDS)	
Q61	8-729-920-21	TRANSISTOR DTC314TKH04 (MDX-C670RDS)	
Q71	8-729-920-21	TRANSISTOR DTC314TKH04 (MDX-C670RDS)	
Q81	8-729-920-21	TRANSISTOR DTC314TKH04 (MDX-C670RDS)	
Q151	8-729-920-21	TRANSISTOR DTC314TKH04	
Q161	8-729-920-21	TRANSISTOR DTC314TKH04	
Q181	8-729-920-21	TRANSISTOR DTC314TKH04	
Q191	8-729-920-21	TRANSISTOR DTC314TKH04	
Q251	8-729-920-21	TRANSISTOR DTC314TKH04	
Q261	8-729-920-21	TRANSISTOR DTC314TKH04	
Q281	8-729-920-21	TRANSISTOR DTC314TKH04	
Q291	8-729-920-21	TRANSISTOR DTC314TKH04	
Q351	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q352	8-729-027-23	TRANSISTOR DTA114EKA-T146	(MDX-C670RDS)
Q401	8-729-120-28	TRANSISTOR 2SC1623-L5L6	(MDX-C670RDS)
Q501	8-729-900-53	TRANSISTOR DTC114EK (MDX-C670)	
Q501	8-729-920-21	TRANSISTOR DTC314TKH04	(MDX-C670RDS)
Q502	8-729-900-53	TRANSISTOR DTC114EK (MDX-C670RDS)	
Q503	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q504	8-729-900-53	TRANSISTOR DTC114EK	
Q531	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q551	8-729-924-73	TRANSISTOR FMA9	
Q631	8-729-030-18	TRANSISTOR 2SD2525	
Q632	8-729-030-18	TRANSISTOR 2SD2525	
Q633	8-729-921-25	TRANSISTOR FMC2	
Q634	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q637	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q651	8-729-106-60	TRANSISTOR 2SB1115A	
Q652	8-729-900-53	TRANSISTOR DTC114EK	
Q671	8-729-807-12	TRANSISTOR 2SD1802-S	
Q672	8-729-921-25	TRANSISTOR FMC2	
Q681	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q701	8-729-900-53	TRANSISTOR DTC114EK	
		< RESISTOR >	
R1	1-216-037-00	METAL CHIP 330 5% 1/10W	
R2	1-216-049-11	METAL GLAZE 1K 5% 1/10W	
R3	1-216-041-00	METAL CHIP 470 5% 1/10W	
R4	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R5	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R6	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R7	1-216-105-00	METAL GLAZE 220K 5% 1/10W	
R8	1-216-097-00	METAL GLAZE 100K 5% 1/10W	(MDX-C670RDS)
R9	1-216-295-00	CONDUCTOR, CHIP (2012) (MDX-C670)	
R10	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R11	1-216-295-00	CONDUCTOR, CHIP (2012)	
R31	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R32	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R34	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R36	1-216-073-00	METAL CHIP 10K 5% 1/10W	(MDX-C670)
R37	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R38	1-216-295-00	CONDUCTOR, CHIP (2012) (MDX-C670)	
R51	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R52	1-216-198-00	METAL GLAZE 1K 5% 1/8W	
R53	1-216-238-00	METAL GLAZE 47K 5% 1/8W	(MDX-C670RDS)
R54	1-216-073-00	METAL CHIP 10K 5% 1/10W	(MDX-C670)
R54	1-216-075-00	METAL CHIP 12K 5% 1/10W	(MDX-C670RDS)
R55	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	(MDX-C670RDS)
R56	1-216-073-00	METAL CHIP 10K 5% 1/10W	(MDX-C670RDS)
R57	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	(MDX-C670RDS)
R61	1-216-073-00	METAL CHIP 10K 5% 1/10W	(MDX-C670: US, Canadian/MDX-C670RDS)
R61	1-216-075-00	METAL CHIP 12K 5% 1/10W	(MDX-C670: E)
R62	1-216-073-00	METAL CHIP 10K 5% 1/10W	(MDX-C670: US, Canadian)
R62	1-216-081-00	METAL CHIP 22K 5% 1/10W	(MDX-C670: E/MDX-C670RDS)
R71	1-216-073-00	METAL CHIP 10K 5% 1/10W	(MDX-C670: US, Canadian/MDX-C670RDS)

MAIN

Ref. No.	Part No.	Description			Remark
R71	1-216-075-00	METAL CHIP	12K	5%	1/10W (MDX-C670: E)
R72	1-216-073-00	METAL CHIP	10K	5%	1/10W (MDX-C670: US, Canadian)
R72	1-216-081-00	METAL CHIP	22K	5%	1/10W (MDX-C670: E/MDX-C670RDS)
R81	1-216-073-00	METAL CHIP	10K	5%	1/10W
R82	1-216-067-00	METAL CHIP	5.6K	5%	1/10W (MDX-C670: US, Canadian)
R82	1-216-081-00	METAL CHIP	22K	5%	1/10W (MDX-C670: E/MDX-C670RDS)
R101	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R102	1-216-073-00	METAL CHIP	10K	5%	1/10W
R103	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R104	1-216-073-00	METAL CHIP	10K	5%	1/10W
R105	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R106	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R131	1-216-073-00	METAL CHIP	10K	5%	1/10W
R132	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R151	1-216-033-00	METAL CHIP	220	5%	1/10W
R152	1-216-081-00	METAL CHIP	22K	5%	1/10W
R161	1-216-033-00	METAL CHIP	220	5%	1/10W
R162	1-216-081-00	METAL CHIP	22K	5%	1/10W
R171	1-216-075-00	METAL CHIP	12K	5%	1/10W
R172	1-216-073-00	METAL CHIP	10K	5%	1/10W
R181	1-216-073-00	METAL CHIP	10K	5%	1/10W
R183	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R191	1-216-073-00	METAL CHIP	10K	5%	1/10W
R193	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R201	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R202	1-216-073-00	METAL CHIP	10K	5%	1/10W
R203	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R204	1-216-073-00	METAL CHIP	10K	5%	1/10W
R205	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R206	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R231	1-216-073-00	METAL CHIP	10K	5%	1/10W
R232	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R251	1-216-033-00	METAL CHIP	220	5%	1/10W
R252	1-216-081-00	METAL CHIP	22K	5%	1/10W
R261	1-216-033-00	METAL CHIP	220	5%	1/10W
R262	1-216-081-00	METAL CHIP	22K	5%	1/10W
R271	1-216-075-00	METAL CHIP	12K	5%	1/10W
R272	1-216-073-00	METAL CHIP	10K	5%	1/10W
R281	1-216-073-00	METAL CHIP	10K	5%	1/10W
R283	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R291	1-216-073-00	METAL CHIP	10K	5%	1/10W
R293	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R331	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R332	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R351	1-216-037-00	METAL CHIP	330	5%	1/10W
R352	1-216-037-00	METAL CHIP	330	5%	1/10W (MDX-C670RDS)
R381	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R384	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R401	1-216-129-00	METAL CHIP	2.2M	5%	1/10W (MDX-C670RDS)
R402	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W (MDX-C670RDS)
R403	1-216-057-00	METAL CHIP	2.2K	5%	1/10W (MDX-C670RDS)
R501	1-216-073-00	METAL CHIP	10K	5%	1/10W
R502	1-216-025-00	METAL GLAZE	100	5%	1/10W
R503	1-216-025-00	METAL GLAZE	100	5%	1/10W
R504	1-216-150-00	METAL GLAZE	10	5%	1/8W
R505	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R531	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R532	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R534	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R551	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R552	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R553	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R554	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R555	1-216-025-00	METAL GLAZE	100	5%	1/10W
R556	1-216-025-00	METAL GLAZE	100	5%	1/10W
R557	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R558	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R559	1-216-025-00	METAL GLAZE	100	5%	1/10W
R560	1-216-025-00	METAL GLAZE	100	5%	1/10W
R561	1-216-025-00	METAL GLAZE	100	5%	1/10W
R631	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R632	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R633	1-216-037-00	METAL CHIP	330	5%	1/10W
R634	1-216-037-00	METAL CHIP	330	5%	1/10W
R635	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R636	1-216-073-00	METAL CHIP	10K	5%	1/10W
R637	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R638	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R639	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R651	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R652	1-216-663-11	METAL CHIP	3.3K	0.5%	1/10W
R653	1-216-073-00	METAL CHIP	10K	5%	1/10W
R654	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R655	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R656	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R657	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R658	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R659	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R671	1-216-190-00	METAL GLAZE	470	5%	1/8W
R681	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R682	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R683	1-216-073-00	METAL CHIP	10K	5%	1/10W
R684	1-216-085-00	METAL CHIP	33K	5%	1/10W
R685	1-216-073-00	METAL CHIP	10K	5%	1/10W
R686	1-216-073-00	METAL CHIP	10K	5%	1/10W
R702	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R709	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R710	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R711	1-216-097-00	METAL GLAZE	100K	5%	1/10W

Ref. No.	Part No.	Description				Remark
R681	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R682	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R683	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R684	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R685	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R686	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R702	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R709	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R710	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R711	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R712	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R713	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R715	1-216-097-00	METAL GLAZE	100K	5%	1/10W	(MDX-C670: E)
R716	1-216-097-00	METAL GLAZE	100K	5%	1/10W	(MDX-C670RDS)
R717	1-216-085-00	METAL CHIP	33K	5%	1/10W	(MDX-C670RDS)
R717	1-216-097-00	METAL GLAZE	100K	5%	1/10W	(MDX-C670)
R724	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R725	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	(MDX-C670)
R726	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	(MDX-C670)
R727	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R729	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R730	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R731	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R732	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R734	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R751	1-216-049-11	METAL GLAZE	1K	5%	1/10W	(MDX-C670RDS)
R753	1-216-049-11	METAL GLAZE	1K	5%	1/10W	(MDX-C670RDS)
R755	1-216-089-00	METAL GLAZE	47K	5%	1/10W	(MDX-C670RDS)
R756	1-216-089-00	METAL GLAZE	47K	5%	1/10W	(MDX-C670RDS)
R757	1-216-089-00	METAL GLAZE	47K	5%	1/10W	(MDX-C670RDS)
R758	1-216-097-00	METAL GLAZE	100K	5%	1/10W	(MDX-C670RDS)
		< CONPOSITION CIRCUIT BLOCK >				
RB551	1-233-412-11	RES, CHIP NETWORK 1.0K (3216)				
RB552	1-233-412-11	RES, CHIP NETWORK 1.0K (3216)				
RB701	1-233-413-11	RES, CHIP NETWORK 2.2K (3216)				
RB702	1-233-810-21	RES, NETWORK 100K (3216)				
RB703	1-233-412-11	RES, CHIP NETWORK 1.0K (3216)				
RB704	1-233-412-11	RES, CHIP NETWORK 1.0K (3216)				
		< VARIABLE RESISTOR >				
RV1	1-223-591-11	RES, ADJ, CARBON 470K (MDX-C670RDS)				

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
S551	1-692-431-21	SWITCH, TACTILE (RESET)	
S701	1-572-552-21	SWITCH, SLIDE (FREQUENCY SELECT)	(MDX-C670: E)
S702	1-572-552-21	SWITCH, SLIDE (POWER SELECT)	
		< THERMISTOR >	
TH501	1-801-792-21	THERMISTOR, POSITIVE	
		< TUNER >	
TU1	A-3282-029-A	TUNER UNIT (TUX-006/2 (E))	
		< VIBRATOR >	
X31	1-760-838-21	VIBRATOR, CRYSTAL (7.2MHz)	
X401	1-579-242-41	VIBRATOR, CRYSTAL (4.332MHz)	(MDX-C670RDS)
X701	1-767-460-21	VIBRATOR, CERAMIC (5MHz)	
X702	1-579-886-21	VIBRATOR, CRYSTAL (32.768kHz)	
X751	1-767-459-21	VIBRATOR, CERAMIC (8MHz) (MDX-C670RDS)	

****

9-925-530-82

Sony Corporation
Personal & Mobile Communication Company

97G0581-1
Printed in Japan © 1997. 7
Published by Quality Assurance Dept.